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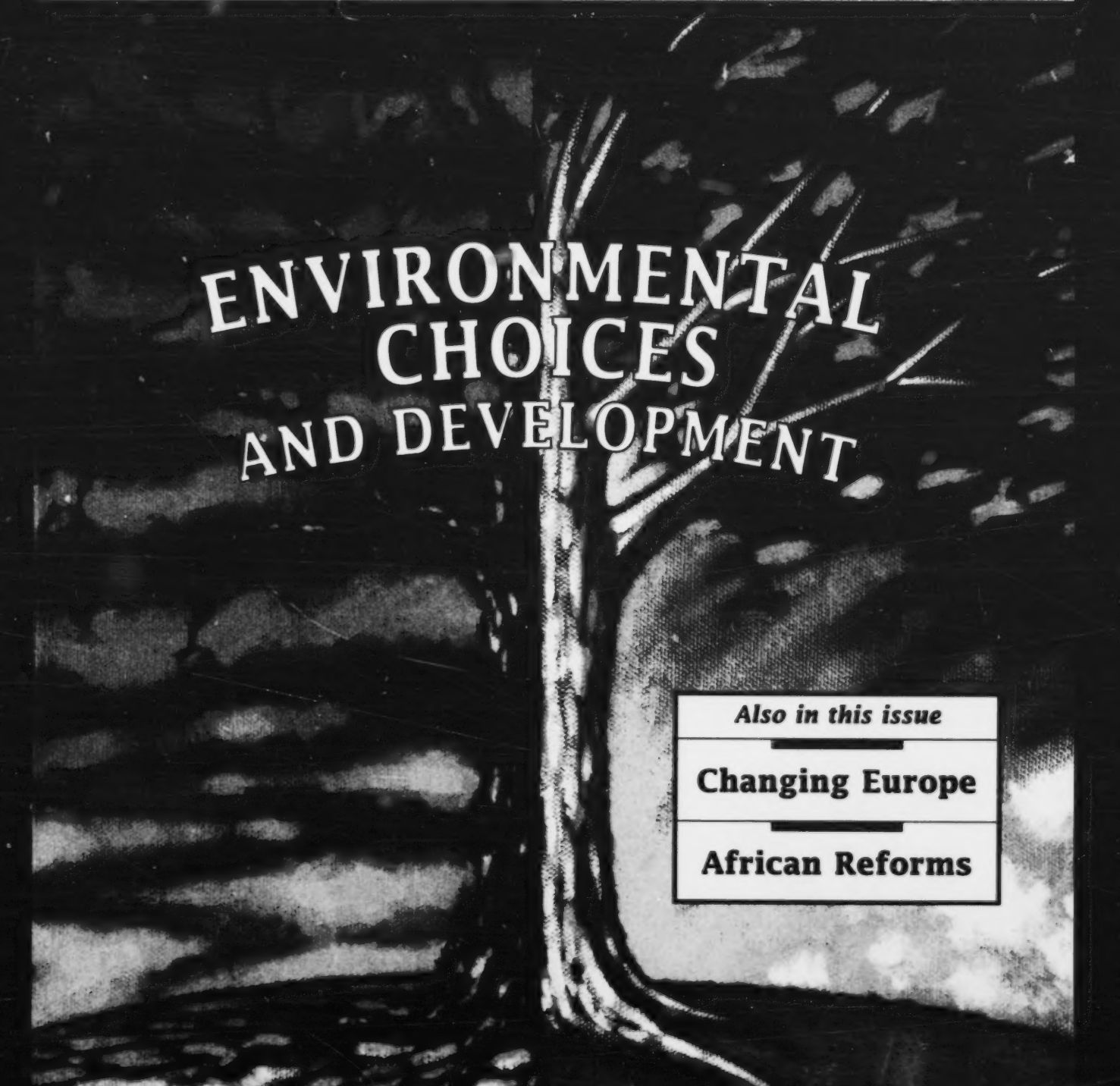

ENVIRONMENTAL CHOICES AND DEVELOPMENT

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Changing Europe

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READEX FICHE

Europe's Emerging Economic and Monetary Union

European Community member states now face critical decisions on the design and implementation of monetary policy

Jacob A. Frenkel and Morris Goldstein

After more than a decade of experience with the European Monetary System (EMS), the 12 member countries of the European Community are now engaged in important discussions and negotiations about the path to economic and monetary union (EMU). This article takes a look at key issues relating to the design and implementation of monetary policy in the emerging EMU, without endorsing or dismissing specific institutional proposals for transition to EMU. The emphasis is on the interrelationships among price stability, current account equilibrium, and exchange rate stability, as well as the questions of the degree of coordination and rules versus discretion. Also considered are the critical implications of fiscal policy for the conduct of monetary policy, along with alternative ways of encouraging fiscal discipline.

Monetary policy goals

Progress toward EMU necessarily requires a consensus to be reached among participating countries on the goals of monetary policy. During the 1960s and the 1970s, monetary policies in the major industrial nations typically embraced a number of objectives, notably price stability, full employment, and sustainable economic growth (and for some, exchange rate stability and stability of the financial system). But in the last decade or so, governments have concentrated on the objective of controlling inflation, with price stability being regarded—appropriately in our view—as a necessary (albeit not sufficient) condition for achieving other economic goals, including sustainable economic growth.

Consistent with this tendency, there appears to be broad agreement that a European System of Central Banks, or "EuroFed," should have an explicit mandate to pursue price stability (see "Europe: The Quest for Monetary Integration," by Horst Ungerer in *Finance & Development*, December 1990, for a discussion of the institutional aspects of EMU). To give "teeth" to this commitment, some have proposed giving the "EuroFed" substantial independence, while prohibiting it from granting credit to the public sector. What is less clear is how policy-making authorities should respond to developments in current accounts and frame their exchange rate objectives.

Historically, not all potential EMU members have placed the same emphasis on the current account balance relative to other goals. But the further liberalization of European capital markets might increase the importance of any differences among countries in the importance attached to current account objectives, by making it easier to finance intra-European external imbalances. There is also the matter of Europe's aggregate current account position, which could well influence a future ECU/US dollar or ECU/yen exchange rate. (ECU stands for European Currency Unit, a composite basket of the EC currencies.)

What then should the authorities' attitude be on current account imbalances? Several analysts—ourselves included—believe that such imbalances are not inherently good or bad, but must be assessed on a case-by-case basis. For example, imbalances that arise from temporary differences among countries in the age distribution of the population—which in turn yield differences in private saving patterns—are likely to be benign,

whereas an imbalance that reflects unsustainable borrowing abroad to finance a consumption spree should surely be placed in the malign category.

We see merit in a framework that would consider at least the following factors:

• whether the fiscal position is appropriate (in terms of both the level and composition of government spending, as well as the structure of taxes and borrowing used to finance the budget);

• whether increased investment associated with the external imbalance can be expected to provide a rate of return that exceeds the cost of borrowing (including externalities); and

• whether any increased consumption associated with the imbalance is temporary and desirable for purposes of smoothing movements in consumption over time.

One needs to know the origin of an imbalance before one can decide both if the imbalance needs correcting and how that can best be accomplished.

As for the role of exchange rate objectives, several issues arise: the management of the union's exchange rate vis-à-vis non-EMU currencies; the loss of the nominal exchange rate as a policy instrument; and the choice between rapid and gradual approaches to EMU, with "hard" and "soft" exchange rate commitments, respectively.

Exchange rate management in a tri-polar system. In recent years, we have increasingly felt that a tri-polar exchange rate system, in which exchange rate commitments are "looser" and "quieter" across the poles than within regional currency areas, represents a feasible and desirable evolution of the international monetary system. By tri-polar, we mean a regime where many currencies are linked either to the US dollar, the Japanese yen, or a European currency (e.g., the deutsche mark or the ECU). "Loose" exchange rate commitments imply that exchange rate targets are altered more frequently and are subject to wider margins than with "tighter" commitments. "Quiet" and "loud" commitments are merely a shorthand for distinguishing between confidential and publicly announced exchange rate targets.

Several of the arguments for such a system are directly relevant to how an evolving EMU might react to exchange rate movements outside the union. First, an exchange rate system that has as its regional nominal anchors, three relatively independent central banks—each committed to price stability—is not conducive to policy "blueprints" that require monetary policy in the anchor countries to give first priority to keeping exchange rates within loud target zones. Second, real exchange rates across the three poles need some flexibility to be able to reflect changes in real economic conditions over time. Third, better disciplined monetary and fiscal policy within each of the currency areas would go a long way toward establishing more disciplined exchange markets across the poles. Fourth, intervention to manage exchange rates across the poles (i.e., $/ECU, $/yen, ECU/yen) should be saved for cases where there is strong evidence of bubbles or large misalignments in exchange rates.

This should not be interpreted as a call for return to "benign neglect" in the management of major currency exchange rates. Quite the contrary, as we regard a reasonable degree of exchange rate stability for key currencies as a public good for the system. Our argument instead is that the stabilizing effect of any official exchange rate commitment on expectations depends on its credibility. A looser commitment across the poles—wherein authorities "keep their powder dry" for large, clear-call misalignments and do not claim that the primary assignment of monetary policy is for external balance—should be more credible than a (nominally) tighter and louder commitment. But the same logic also points to tight, loud exchange rate commitments *within* currency areas, one of which is an emerging EMU. Here, the incentives for stabilizing exchange rates are greater—because these economies are more open, because trade flows among union members account for a large share of members' total trade, because exchange rate stability is closely linked to larger, regional integration objectives, and because there are larger gains in anti-inflationary credibility to be had by "tying one's hands" on monetary policy via exchange rate fixity.

Nominal exchange rates within the union. What about the pressing issue of managing exchange rates within, and on the way to, monetary union? One key issue relates to the consequences of losing the nominal exchange rate as a policy instrument. Economic theory suggests that the types of shocks hitting an economy (monetary or real) should be an important factor in the choice of an exchange rate regime. The potential problem of a monetary union is adjusting to country-specific real shocks. Here, three questions need to be addressed.

• Are the real economic shocks that typically hit European economies industry-specific rather than country-specific? If they are industry-specific and if potential EMU members have well-diversified industrial structures, then it is possible that these shocks largely cancel out at the country level; but if shocks are predominantly country-specific, potential difficulties are obviously greater.

• Will the increased competition in goods and factors markets associated with 1992 increase the downward flexibility of money wages and prices in Europe? If so—and we do not discount this possibility—it will be less costly to achieve needed changes in real exchange rates via changes in internal wages and prices.

• Is there in operation a federal fiscal authority that could automatically adjust a country's tax and transfer payments in the event of country-specific real shocks—and in a roughly budget-neutral fashion for the union as a whole? As is well known, this kind of tax and transfer system operates as a cushioning device in the United States.

The more confident one can be that the answers to these questions are "yes," the less concerned can monetary authorities afford to be in embracing greater (nominal) exchange rate fixity on the path to EMU.

The exchange rate regime in the transition to EMU. Assume, in keeping with the spirit of EMU, that a judgment has been made to make use of the nominal exchange rate as a policy instrument only in "exceptional" circumstances. This still leaves unanswered whether the transition should be rapid or gradual and whether exchange rate commitments should be absolute or conditional.

One option would be to move rapidly to EMU itself, that is, to a common currency (e.g., the ECU) and to a central monetary authority (e.g., the EuroFed). This would carry a number of attractions. First, it gives maximum credibility to exchange rate stability by eliminating exchange rates within the union. A common currency is harder to "undo" than a commitment to "irrevocably fixed" exchange rates, and market participants presumably know it. Second, a common currency allows EMU participants to obtain more of the efficiency gains associated with moving closer to one money than do fixed exchange rates. Third, a central monetary authority can in principle avoid the negative externalities associated with beggar-thy-neighbor policies taken by competing national monetary authorities. Fourth, a central monetary authority may be able to implement monetary control more effectively than individual national central banks—because the demand for money in the wider area may be more stable under open capital markets and full financial liberalization than are individual-country money demands.

On the negative side, two concerns arise about a rapid move to EMU. One is that the participating countries will not be "ready" for a common currency or a common monetary policy, be it because of inadequate conver-

gence of economic performance (particularly of inflation), inadequate consensus on the goals or framework for monetary policy, or inadequate experience with common institutions. To some observers, this lack of readiness calls either for a two-track approach—where the fast track is limited to a subset of potential members who already are ready in terms of convergence of economic performance—or for waiting together until a wider group of members is ready. A second objection is that an administrative, centralized approach to currency and monetary management will result in average—or even worse, collusive, below-average—performance; in contrast, a "competitive" approach—so the argument goes—would allow the market to converge on "the best in the Community."

Another option would be to pursue a slower transition to EMU, characterized by the coexistence of a federal monetary authority and national central banks, and by a looser commitment to fixed exchange rates. This option clearly provides more scope for learning by doing and for making monetary policy more accountable to national governments. But as critics point out, such a strategy cannot escape the constraint that only two of the following three objectives can be obtained simultaneously: open capital markets, fixed exchange rates, and independent monetary policy. With capital controls all but gone and with increased opportunities for diversification of currency portfolios, a commitment to truly fixed exchange rates will be credible only if monetary policy coordination—ex ante and ex post—is tighter than in the past. In fact, the very liberalization processes that give rise to increased currency substitution, along with any destabilizing speculation, may well call for more frequent recourse to coordinated interest rate adjustments; otherwise, national monetary control is apt to be rendered less effective.

A related challenge thrown up by the coexistence of central and national monetary authorities and by a desire to introduce more symmetry of adjustment into the system, is that the rules of the game may become more difficult to define than in the existing EMS. Not only does the assignment of responsibilities have to be clearly understood, but also that assignment has to respect the primacy of price stability as a goal of EMU.

Carrying out monetary policy

During the transition to EMU, EC member governments will also have to come to terms with at least two important issues relating to the implementation of monetary policy: the degree of coordination, and rules versus discretion.

We see the current process of financial liberalization, innovation, globalization, and securitization as strengthening the case for closer coordination of monetary policy on at least three counts.

• The shift away from credit rationing and quantitative lending restrictions means that the transmission mechanism of monetary policy falls more heavily on interest rates and exchange rates—the "competitive" variables most often the subject of beggar-thy-neighbor complaints. Coordination is a way of discouraging such practices. The degree of conflict that exists in the transition to EMU is not irrelevant for prospects of actually achieving EMU.

• When there is a sudden, large increase in currency substitution, it may become more difficult to implement reliable monetary control at the national level without stronger coordination among monetary authorities.

. . . when fiscal policy is undisciplined and works in a direction opposite to that of monetary policy, efforts to promote price stability, effective external adjustment, and exchange market stability will be seriously handicapped.

• The problem of systemic risk does not lend itself easily to an autonomous, competitive approach, and this is of particular relevance to the Europe of 1992 and beyond. In an environment where there are increasing competitive pressures in financial services, universal banking throughout the region, equity prices moving more closely across countries, and a desire on the part of monetary authorities to establish or maintain anti-inflationary credibility, it would not be surprising if some financial institutions experienced difficulties. A national monetary authority might act to contain such difficulties by providing emergency liquidity support or by activating official or private deposit insurance schemes. However, official safety nets, as with other types of insurance, raise moral hazard issues; in this case, the encouragement to undertake an unduly high share of risky activities, giving rise to unfavorable consequences for the public sector's liability.

This problem could be reduced if financial institutions maintained adequate capital requirements, or if access to deposit insurance went hand-in-hand with restrictions on institutions' activities. But in a world of financial liberalization, any single country's attempt to impose stiffer regulatory standards could result merely in firms fleeing to countries with more lax standards (resulting in a form of regulatory arbitrage). A coordinated approach to regulation can accomplish what a competitive approach cannot. The recently concluded Basle Agreement on risk-weighted capital standards for commercial banks in the Group of Ten countries is a case in point.

This brings us to the familiar issue of rules versus discretion, which would need to be addressed whether a coordinated or competitive approach to monetary policy was selected. Those who favor policy rules make essentially three arguments. First, rules are a viable mechanism for imposing discipline on economic policymakers who might otherwise manipulate the instruments of policy for their own objectives and to the detriment of the public. Second, rules can reduce the cost of negotiations and burden-sharing conflicts. Third, rules are regarded as enhancing the predictability of policy actions, thereby improving the private sector's ability to make informed resource allocation decisions.

These arguments in favor of policy rules are powerful, but their immediate operational attractiveness is blunted by two considerations—both of which are relevant to an emerging EMU. One is that rules that do not adapt to major changes in the operating environment run the risk of worsening policy performance. The weakening in many countries of the link between narrow monetary aggregates and the ultimate goals of monetary policy in the face of large-scale financial innovation and institutional change is a leading case in point. In recognition of these changes in the operating environment, several prominent supporters of policy rules have incorporated trend changes in velocity into their money supply or national-income rules (what we might call "evolutionary" rules)—while several monetary authorities have indicated that they now employ a more eclectic approach to monetary policy (where the behavior of monetary aggregates is taken into account along with a set of other variables). A second consideration is that rules will impart greater discipline to policy only to the extent that penalties for breaking the rules are significant enough to ensure that the rules are followed. The sanctions available against sovereign nations for breach of economic policy commitments should not be exaggerated.

Search for fiscal discipline

A striking lesson of the 1980s is that when fiscal policy is undisciplined and works in a direction opposite to that of monetary policy, efforts to promote price stability, effective external adjustment, and exchange market stability will be seriously handicapped. Basically, there are three potential mechanisms for encouraging greater fiscal discipline.

The exchange rate regime. Experience is not kind to the view that the exchange rate regime by itself can enforce discipline on fiscal policy. Thus after more than ten years of operation—and with a clear progression toward greater fixity of exchange rates—there is little evidence of fiscal policy convergence in the EMS. Monetary policy convergence, yes—but not fiscal policy convergence. In a similar vein, the North American experience with much greater exchange rate flexibility hardly suggests that this exchange rate regime can consistently rein in fiscal policies. It is not difficult to construct theoretical examples where the exchange rate regime sends either a false signal, or no signal at all, about the need for fiscal adjustment. Typically, this comes about because the higher interest rate associated with fiscal expansion induces a capital inflow that either prompts a loosening of monetary policy (to keep the exchange rate within its target), or simply makes the fiscal deficit easier to finance.

The market. What then about the discipline imposed by "the market?" Such market discipline is usually said to operate via two channels. The first is the higher cost of borrowing associated with consistent fiscal imprudence—as the markets exact an increasing risk premium to reflect lower expected repayment. At some point, markets could even impose their ultimate sanction, by refusing to lend altogether to the unrepentant borrower. The second is via pressures for tax harmonization. In short, a government that spends a lot will eventually have to tax a lot, but high taxes will, in turn, induce firms and individuals to move to jurisdictions with lower taxes. Declining tax revenues will then force tax harmonization, and finally, a halt to excessive spending.

For market discipline to work, the following conditions need to be satisfied.

• The market must have accurate and comprehensive information on the size and composition of the debtor's obligations, so that it can make a valid assessment of debt-servicing obligations relative to ability-to-pay. Credit-rating agencies can of course assist in this information processing task, but they need to be cautious since a rating change can become a self-fulfilling prophecy. In addition, debtors may not have incentives to reveal unfavorable information before mandated reporting dates.

• There must not be any implicit or explicit guarantee of a bail out. For if there is the expectation of a bail out, then the interest rate charged will reflect the creditworthiness of the guarantor—not that of the debtor. The market's perception of a bail out is sometimes cited as a reason why in the 1970s interest rate spreads on bank loans to developing countries were so slow to rise. It is of course possible for the overseeing fiscal authority to issue a no bail-out pledge. The problem is that it may be difficult to make this pledge credible if troubled debtors were in the past bailed out.

• The financial system must be strong enough for any given debtor not to be regarded as too large to fail; if other financial institutions are large holders of the troubled debtor's obligations, it will be harder to exercise discipline.

• The borrower's debt must not be monetized by central bank purchases—that is, be allowed to be translated into an expansion of the money supply. This is because the resulting erosion of the real value of the debt will make it difficult for the market to price it accurately.

• There must be neither high costs of mobility nor the provision of public services that compensate for tax differentials (this condition applies specifically to tax harmonization). If mobility costs are high, individuals and firms are less likely to "vote with their feet" when taxes are raised. If better public services are offered in high tax districts, then high taxes do not provide an incentive to leave.

The empirical evidence on market discipline is quite limited. From the viewpoint of an emerging EMU, perhaps the most relevant work is that dealing with common currency areas that have federal fiscal systems (such as the United States and Canada), and where there is no explicit or implicit guarantee of a bail out for fiscal adventurism at the local level. A recent analysis of whether US states with higher debt burdens actually paid higher interest rates on their debt was undertaken by Professor Barry Eichengreen of the University of California at Berkeley. He found only a weak, positive relationship between debt burdens and the cost of borrowing, and no evidence that borrowing costs accelerate at very high debt levels. Moreover, even if stronger empirical evidence linking borrowing costs to fiscal irresponsibility were available, it would give us only half the picture. Still missing is evidence that higher borrowing costs actually induce governments to correct fiscal policy excesses; to our knowledge, no such tests are yet available.

Peer group surveillance. This would offer still another mean of encouraging fiscal discipline. One possibility would be a fiscal policy rule that put a ceiling on each participant's fiscal deficit. The main difficulty with rigid fiscal policy rules is that they may not take adequate account of relevant differences between countries—in private savings rates, outstanding debt stocks, the uses to which government expenditures are put, past credit histories, etc. In addition, there may be few sanctions that can be imposed on noncomplying members. For these reasons, peer group surveillance typically takes place in a voluntary, discretionary format. But this mode of operation faces its own obstacles: fiscal policy is inflexible (at least relative to monetary policy); it operates with long and variable lags that depend in good measure on the pace of legislative actions; and the effects of fiscal policy on macro-variables of interest hinge on what kind of fiscal action is taken (taxes versus expenditures, expenditures on tradables versus nontradables, taxes on saving versus investment, etc.). Then, too, surveillance exercises invariably employ multi-indicator methods, where the tendency of different indicators to point in different directions gives considerable scope for discretion in policy diagnosis and prescription.

The likelihood that no single mechanism can be relied upon to yield fiscal discipline means that a broad-based approach that leans both on markets and on surveillance will be called for. The transition to EMU will proceed a lot smoother if fiscal policy can be made to work with monetary policy in achieving EMU's basic economic goals. ■

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The Macroeconomic Effects of German Unification

Changes and challenges for both west and east Germany, and their consequences for Europe and the world economy. Some simulation results

Paul Masson and Donogh McDonald

Germany is united again. Beyond the certainty of this union lie many questions about its economic effects, domestic and foreign. In order to obtain a clearer understanding of these effects, it is useful to examine them within a detailed quantitative framework. A study done within the International Monetary Fund recently (see box on publication), and whose results are summarized here, concludes that the path taken by east Germany will have major implications for the economy of the united Germany but that the international effects of unification may be relatively moderate.

Transforming the eastern economy

Will the evolution of the east German economy over the next decade reveal a new *Wirtschaftswunder* (economic miracle) or the emergence of another regional problem within the European Community (EC)? In many respects, the prognosis is favorable. For example, the saving surplus in west Germany represents a ready source of financing for the investment needs of the east. Moreover, it may be possible to revive quickly the pre-World War II tradition of enterprise in the eastern part of the country, despite its long suppression by central planning. But capital is scarce in east Germany, and it will be some time before west German wage levels can be supported in the east. This creates obvious tensions. A slow closing of the earnings gap between the east and the west might result in a migration of the most skilled workers to the west, while a premature narrowing of the gap could well discourage investment; either situation might endanger the process of economic recovery in the east.

To analyze these issues, IMF staff developed a detailed macroeconomic model of east Germany's economy (see box on model). Major uncertainties shroud the initial conditions in the east, the likely response of foreign investors, prospective migration patterns, the ability of east Germany to absorb large-scale investment (particularly in the initial years after unification), and the policy and institutional framework. The scenarios constructed with the model, therefore, are not predictions; rather they illustrate possible developments under carefully selected assumptions. They take as their starting point a profile of the economic situation in east Germany in the second half of 1990, assuming that, immediately prior to unification, underlying labor productivity in the east was about 30 percent of the level in west Germany. The growth rates required in the east to narrow the productivity gap over the next decade depend not only on the size of the initial gap but also on the increase in labor productivity in west Germany. The scenarios assume that labor productivity in west Germany will grow at about 2½ percent a year, or cumulatively by close to one third, between 1990 and 2001.

For productivity in east Germany to rise to west German levels by 2001, output in the east would have to increase at a rate of 13 percent a year, assuming that the labor force in east Germany declines by 10 percent (as a result of migration and lower labor force participation rates). Elimination of inefficiencies in the use of capital and labor would make a significant contribution to growth. However, even making some allowance for the benefits that might be associated with the relatively newer capital stock in east Germany, a cumulative net investment of some DM 1,800 billion (in 1990 prices) would also be needed over the period 1991–2000, an amount almost as large as the net national product of west Germany in 1990. A less ambitious target might be to achieve a productivity level in east Germany by 2001 that is 80 percent of the level in west Germany. This would produce a productivity gap similar to that currently existing between the three poorest states of west Germany and the eight more prosperous ones. It would entail a cumulative net investment of DM 1,100 billion and an average output growth rate of 10½ percent, still a rather formidable goal.

Scenario A, the more optimistic of the two scenarios discussed here, is consistent with this latter target (see chart). While unemployment is initially high—one fourth of the labor force in 1991—it falls rapidly and by the end of the scenario is at about the same level (6 percent) as is assumed for west Germany. Gross investment averages a very large 43 percent of GDP in east Germany in 1991–92. This is financed entirely by external resources (including fiscal transfers from west

New publication on Germany

The IMF has recently published Occasional Paper No. 75, "German Unification: Economic Issues" $10 (see back cover for ordering information). The scenarios for east Germany outlined in this article are drawn from Chapters IV, "Investment Needs in East Germany," and V, "East Germany: The New Wirtschaftswunder*?," both authored by Donogh McDonald and Gunther Thumann. The assessment of the implications for west Germany and the rest of the world is based on Chapter VI, "Domestic and International Macroeconomic Consequences of German Unification," by Paul Masson and Guy Meredith. The other nine chapters of the occasional paper cover a range of topics including fiscal and monetary policy, the labor market, and the behavior of savers and investors, as well as the challenges of systemic reform in east Germany.*

Germany); indeed, external resources amount to about 150 percent of net investment as consumption in east Germany substantially exceeds net output. Over the period 1991–2001 as a whole, three fourths of net investment is financed from outside east Germany (including fiscal transfers from west Germany). This estimate of external resource needs is, however, sensitive to the balance between fiscal transfers and other forms of external financing. The calculations here assume that government current account deficits in east Germany are wholly financed by transfers from west Germany.

Under Scenario A, imports into east Germany of goods and nonfactor services are initially of the order of DM 120–130 billion per year, or 5 percent of GNP in west Germany. Over time, these net imports decline and are close to zero by 2001. This happens partly because investment requirements fall in relation to output, but, more important, because the saving rate rises. Though private saving increases, the principal source of the stronger external position is the improvement in the government accounts. The general government deficit in the east is, in the early years, very large (almost one half of GDP in the east in 1991), but drops steadily with a primary budget surplus emerging in 2000.

Scenario B (also plotted in the chart) is less optimistic, with productivity in east Germany in 2001 at only 60 percent of that in west Germany and large-scale migration from east to west. Lower investment than in Scenario A and a slower reduction of inefficiencies in the use of labor and capital produce this less robust economic performance. Net investment in 1991–92 is only 60 percent of that in Scenario A, and this relative weakness persists throughout the scenario as the initial hesitancy of investors is reinforced by aggressive wage demands and by structural weaknesses in the economy. The fiscal imbalance starts out worse than in Scenario A and remains stubbornly high as low growth restrains revenue and boosts social expenditure relative to GDP; in the year 2001, the primary fiscal deficit in east Germany is around 9 percent of GDP. Larger accumulated deficits also increase interest payments, but given the assumption on transfers from west Germany, those interest costs are recorded in the government accounts of the western part of the country. Reflecting these fiscal developments, the imbalance in the external accounts is much larger than in Scenario A.

World saving

In a world of high capital mobility, investment can tap an international pool of saving, rather than being restricted to a local capital market. A useful starting point in gauging the effects of unification beyond east Germany is to consider the extent to which increased investment and higher social spending in east Germany would draw upon global saving. Scenarios A and B produce broadly similar figures for east Germany's average net import demand over 1990–94 (averaging $60 billion a year)—lower output in Scenario B is offset by lower demand over this period. These net imports compare with world saving of $4 trillion. Clearly, the external resource needs of east Germany are relatively small—less than 2 percent of total world saving. An important issue is the extent to which those needs can be satisfied by higher saving in west Germany, and, in particular, by higher output there. This will depend on supply capacity in west Germany, which, in turn, is influenced by the growth of the labor force there.

Unification has re-established free mobility between east and west Germany. The resulting migration from the east can be expected to lead to increases in both aggregate demand and supply in west Germany. In Scenario A, net migration from east to west Germany is assumed to be 320,000 in 1990, falling to 70,000 in 1992, and 20,000 per year after 1993. As a result, potential output is projected to be 1¼ percent higher in west Germany by the year 2001 than it would have been in the ab-

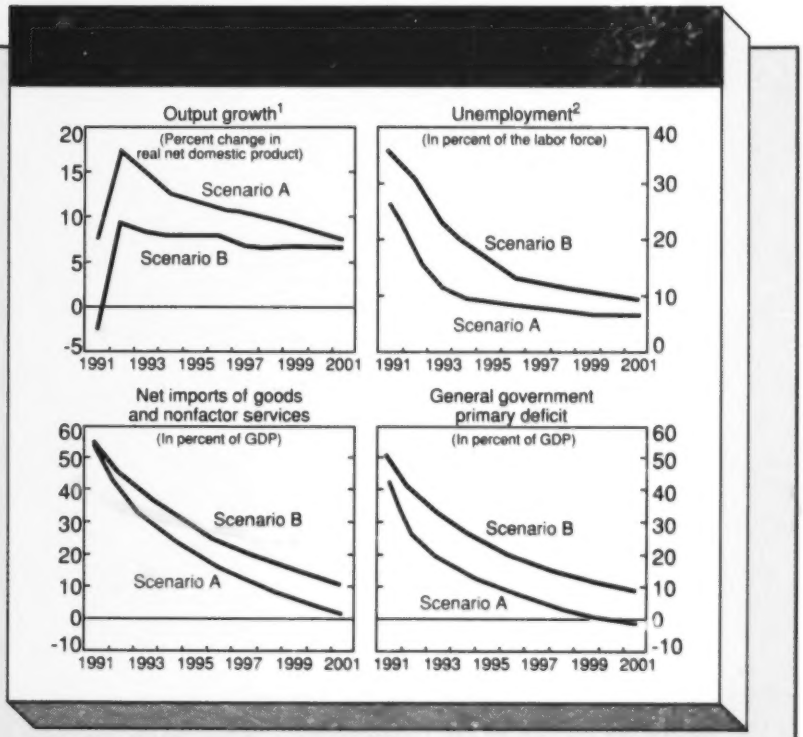
	Optimistic Scenario (A)	Less optimistic Scenario (B)	Indirect tax increase	EMS realignment[1]
German variables[2]				
GDP (In percent)				
1990	0.6	0.6	0.6	0.6
1991	2.4	1.6	2.2	2.4
1992–4	4.2	2.2	3.9	4.2
2001	14.5	8.1	14.5	14.5
Rate of change of GDP deflator (In percent)				
1990	0.2	0.2	0.2	0.2
1991	0.7	0.8	1.7	0.5
1992–4	0.2	0.4	0.3	0.3
2001	–0.2	–0.1	–0.2	–0.2
General government balance (In percent of GDP)				
1990	–2.2	–2.2	–2.2	–2.2
1991	–4.4	–4.8	–3.7	–4.4
1992–4	–2.7	–3.8	–2.0	–2.6
2001	–0.6	–3.3	0.3	–0.7
Current account balance (In percent of GDP)				
1990	–1.3	–1.3	–1.3	–1.3
1991	–2.7	–2.6	–2.6	–2.6
1992-4	–2.3	–2.6	–2.1	–2.3
2001	–0.9	–2.3	–0.5	–0.6
Variables for other European countries[3]				
GDP (In percent)				
1990	–0.2	–0.2	–0.2	–0.2
1991	–0.1	—	–0.1	0.6
1992–4	–0.4	–0.3	–0.3	–0.1
2001	0.2	0.1	0.3	0.2
Rate of change of GDP deflator (In percent)				
1990	—	–0.1	–0.1	–0.1
1991	—	0.1	–0.1	1.3
1992–4	–0.1	0.1	–0.1	1.0
2001	0.3	0.3	0.3	0.4

Source: International Monetary Fund, Occasional Paper No. 75, German Unification: Economic Issues, Chapter VI.
[1]With a loss of credibility of "hard currency" policies by those countries in the Exchange Rate Mechanism (ERM) of the European Monetary System.
[2]Results for unified Germany.
[3]Members of the ERM.

sence of migration, assuming that investment increases sufficiently to maintain the capital to labor ratio. In Scenario B, net migration is assumed to be the same in 1990–91, but to be considerably higher from 1992 onward: 270,000 in that year, and declining to 90,000 in the year 2001. This boosts potential output in 2001 by 3½ percent in the west. However, in the early years, the increase in potential output less increased consumption of the migrants and the higher investment mentioned above will, under both scenarios, be small relative to the external resource needs of east Germany.

rise in global investment relative to saving, real interest rates rise worldwide, though the size of the increase varies from country to country. Increased demand from east Germany is directed partly toward west German goods, which boosts output in west Germany, raises the price of German goods relative to foreign goods (appreciates the real exchange rate of the deutsche mark, through both higher prices in Germany and a stronger currency), and lowers combined German net exports.

The extent of these effects depends on a number of factors. For example, how will unification affect the conduct of macroeconomic policy in Germany? Here, it is assumed that the Bundesbank continues to resist excess demand pressures in the same way as it has in the past, tax rates are unchanged, and increased budget deficits are financed by government debt.



Source: International Monetary Fund, Occasional Paper No. 75, German Unification: Economic Issues, Chapter V.
[1]For 1991, growth is measured using output in the second half of 1990 as a measure of the underlying value of output for all of 1990. Because of the sharp drop in output in the second half of 1990, official data will show negative growth in 1991.
2 Including the effective period of unemployment for those on short-time work.

Effects in Germany and abroad

To quantify the impact of unification outside east Germany, various paths for net import demand, fiscal imbalances, and migration in east Germany were used as inputs to the IMF's global macroeconomic model, MULTIMOD (see box explaining model), and scenarios were calculated relative to a baseline that excludes the effects of unification. Some of the main channels for the transmission of those effects can be sketched. With a

The influence of the level of capacity utilization on inflation is also important. In MULTIMOD, productive capacity is not an absolute constraint on output. Instead, the higher the rate of capacity utilization, the greater are the upward pressures on inflation that result from an increase in demand. In the simulations presented below, the starting point for capacity utilization is high, but it is still below historical peaks reached in 1972–73 and 1979–80. Moreover, as discussed above, further migration from the east tends to increase output capacity. The pressures initially put on capacity in west Germany will also depend on the geographical distribution of east Germany's import demand. Here, two thirds of the increase in demand is assumed to show up, in the first instance, in increased exports by west Germany, and the remainder in other countries' exports (allocated on the basis of historical shares in imports of the Federal Republic of Germany).

The assumed path for net imports into east Germany is illustrated in the chart. Under Scenario A, this stimulus to demand leads to an increase in the rate of growth in west Germany of 0.6 percentage points in 1990 and 1.3 percentage points in 1991. In subsequent years, output growth is lower than it would otherwise have been because the rate of change of net imports from east Germany is negative and because of lagged effects of increased interest rates and currency appreciation. Nevertheless, the *level* of output in the west is higher because of favorable supply effects, and output growth of Germany as a whole is persistently stronger (see table). Inflation pressures, however, are also larger: output prices rise by about one half of a percentage point faster on average over 1990–92 than in the baseline.

Output effects on other countries in the Exchange Rate Mechanism (ERM) of the European Monetary System are negative, but small, while they are slightly positive on non-ERM countries. Both sets of countries are affected to some extent by higher interest rates. The ERM countries, because of the assumed fixity of their central parities, also experience a real effective appreciation (as their currencies increase in value against the dollar and the yen along with the deutsche mark), which, combined with the interest rate increase, offsets the stimulus from stronger exports to Germany. On balance, Scenario A suggests that the international effects of unification are not very large and that increased demand does not put unmanageable strains on German productive capacity. However, higher government spending in Germany leads to an increase of 16 percentage points in the combined government debt/GNP ratio by 1999, which thereafter tends to decline back toward its baseline path.

Scenario B presents a less favorable picture for Germany as a whole, though not for west Germany alone, where output growth is

The modeling exercise described in this article is based on information available in October 1990 and does not incorporate subsequent economic developments and policy announcements. East Germany is treated as a separate economy; there is, for example, a completely separate fiscal sector. While this approach is clearly not consistent with the institutional features of the united Germany, it facilitates the analysis of the effects of unification without causing any fundamental distortions. The scenarios for east Germany are based on a detailed model that integrates the demand, supply, and income sides of the economy. The model is described in Occasional Paper No. 75.

To assess the effects of unification outside east Germany, the results of the scenarios for east Germany have been fed, as an external influence, into the Fund's MULTIMOD model. MULTIMOD constitutes an integrated framework with separate submodels for each of the seven largest industrial countries (of which the model for Germany is, however, based on data for the Federal Republic before unification), for the remaining industrial countries as a group, and for developing countries (divided into capital-exporting and capital-importing countries). It is described in *MULTIMOD MARK II; A Revised and Extended Model*, by Paul Masson, Steven Symansky, and Guy Meredith, Occasional Paper No. 71, International Monetary Fund, July 1990.

boosted by greater migration from the east. There is a larger deterioration in the combined fiscal balance as a ratio to GNP, due to increased unemployment benefits, slower revenue growth, less rapid output growth in the east, and higher interest payments on larger cumulated indebtedness. As a result, government debt reaches 19 percent of combined GNP above baseline by 1995, and 30 percent by 2001. Despite this, effects on financial markets and on other countries differ little from Scenario A, and inflation effects are also similar.

Policy issues and uncertainties

The effects of German unification on government deficits and debt in Germany have been a central feature of the recent policy debate. In particular, the possibility of persistently high government deficits (see, for instance, the less optimistic scenario described above) has caused concern in many quarters. There is a consensus that expenditure reductions in west Germany, particularly of subsidies, are the preferred way of limiting these deficits. However, if sufficient budgetary savings cannot be achieved through expenditure measures, a tax increase may need to be considered. Because of the recent reform of income taxation, raising direct taxes might be counterproductive. Increasing value-added tax rates would appear to be a more attractive alternative; it would be consistent with the government's objective of improving the efficiency of the tax system and would help to bring German VAT rates closer to the EC average.

Scenario A was, therefore, simulated in MULTIMOD with a rise in indirect tax receipts of DM 20 billion in 1991, corresponding to an increase in VAT rates by a little under 2 points in west Germany (additional revenue from a similar VAT increase in east Germany would be some DM 3 billion). The Bundesbank is assumed to raise its monetary target to take into account the initial effect on prices of higher indirect taxes. The additional revenue helps to limit the medium-run budgetary impact of unification: instead of an increase relative to baseline in the combined government debt ratio of 16 percent of GNP in the year 1999 in Scenario A, it increases by only 10 percent in this simulation. The simulated tax increase leads to higher inflation for a while: relative to the baseline, the GNP deflator rises 1.7 percentage points faster in 1991 (one percentage point more than in Scenario A). Since such price rises might kindle fears that inflation would continue, an increase in indirect taxes would have to be weighed carefully.

Scenario A, which assumes that central exchange rate parities within the ERM are unchanged, leads to slightly lower output in other ERM countries. This might be avoided by a realignment of their currencies vis-à-vis the deutsche mark. However, negative effects on the credibility of the "hard currency" policies of ERM countries—that is, the commitment of monetary policy to price stability—would also have to be taken into account. In particular, through tight monetary policies and by avoiding realignment of their exchange rates against the deutsche mark, other ERM countries have, in many cases, succeeded in lowering their inflation rates in recent years close to the German level. Devaluation of their currencies against the deutsche mark might give rise to doubts concerning their anti-inflationary commitment.

The table shows the results of a scenario in which a depreciation of the other ERM currencies against the deutsche mark (by 4 percent) in 1991 induces expectations of further realignments (assumed to equal 1½ percent a year) and consequently of higher inflation in future years. Other ERM countries experience greater inflation than in Scenario A, but also somewhat larger output. The effects on Germany are only slightly different.

Conclusion

Given the uncertainties involved in the transition from a centrally planned to a market economy in the former German Democratic Republic, the model simulations presented above must be seen as only rough quantifications of possible effects of German unification on other countries. In addition to uncertainties concerning economic policies and the behavior of individuals and firms in united Germany, there are other structural changes underway that may modify these results, including moves to greater integration of economies associated with the Single Market Program for the EC.

The general picture that emerges from the scenarios is that the international effects of German unification are relatively moderate. Moreover, these effects are not particularly sensitive to the success of the process of economic transformation in east Germany. This is hardly surprising given the small size of the resources needed in east Germany relative to global saving. But the path the east German economy takes over the coming years will have substantial implications for the now united Germany and may provide important lessons for other Eastern European countries. ■

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The State of the Soviet Economy

As the Union of Soviet Socialist Republics (USSR) struggles to craft and implement far-reaching economic and political reforms, global attention has focused on the state of the Soviet economy. At the July 1990 "Houston Summit," the heads of state and government of the seven principal industrial democracies and the President of the Commission of European Communities requested the International Monetary Fund, the World Bank, the Organization for Economic Cooperation and Development (OECD), and the designated president of the European Bank for Reconstruction and Development to undertake a joint study of the Soviet economy. The team undertaking this study was also requested to make recommendations for reform of the Soviet economy and establish the criteria under which Western economic assistance could effectively support such reforms.

The Soviet authorities cooperated with this study and provided an unprecedented amount of information to the team. The study was completed in December 1990. The accompanying tables and charts, which try to capture briefly the main recent economic trends in the USSR, are based on the summary report of the study. This report is now available from the World Bank (see page 14 for ordering information). The background papers that comprise the full study will soon be published by the OECD.

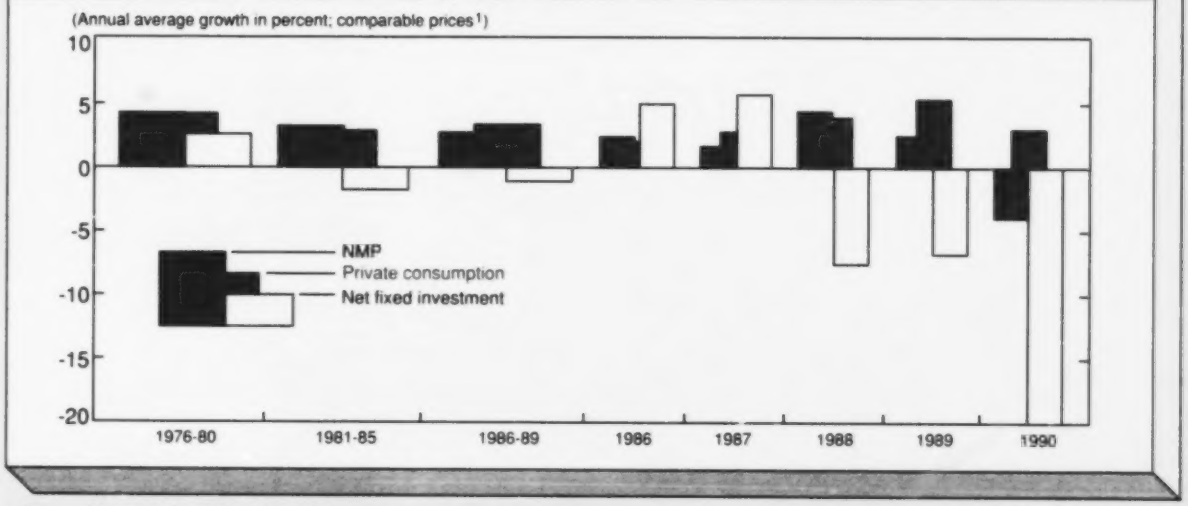
The next issue of *Finance & Development* will contain an article that will discuss the main features of the Soviet economy and its near-term outlook, as well as the recommendations made by the team of experts representing the four institutions that produced the study.

	Population (Percent of total in 1989)	NMP (Current prices, percent of total in 1988)	Deliveries to other republics (Percent of republican NMP in current domestic prices in 1988)	Exports abroad (Percent of republican NMP in current domestic prices in 1988)
Armenia	1.1	0.9	64	1.4
Azerbaidzan[1]	2.5	1.7	59	3.7
Belorussia	3.6	4.2	70	6.5
Estonia	0.5	0.6	67	7.4
Georgia[2]	1.9	1.6	54	3.9
Kazakhstan	5.8	4.3	31	3.0
Kirgizia	1.5	0.8	50	1.2
Latvia	0.9	1.1	64	5.7
Lithuania	1.3	1.4	61	5.9
Moldavia	1.5	1.2	62	3.4
RSFSR[3]	51.3	61.1	18	8.6
Tadzhikstan	1.8	0.8	42	6.9
Turkmenistan	1.3	0.7	51	4.2
Ukraine	18.0	16.3	39	6.7
Uzbekistan[4]	7.0	3.3	43	7.4
Total	100.0	100.0	...	...

Source: Data provided by the Soviet authorities.

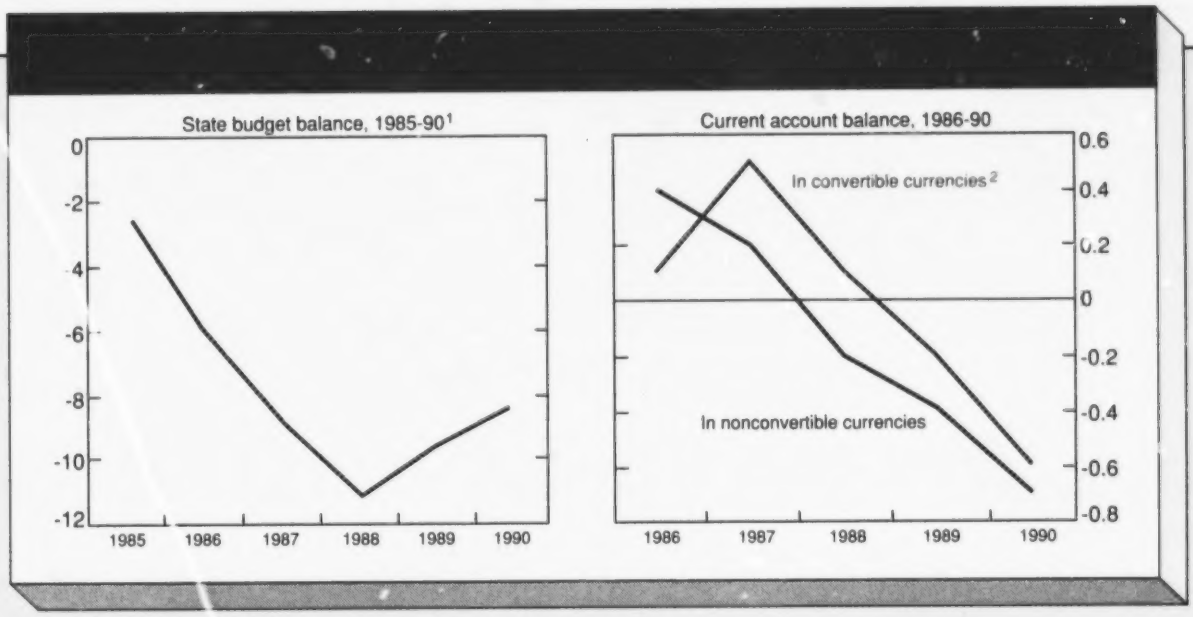
[1]Includes 1 autonomous republic.
[2]Includes 2 autonomous republics.
[3]Russian Soviet Federated Socialist Republic, includes 16 autonomous republics.
[4]Includes 1 autonomous republic.

Note: Net material product differs from GDP largely due to the exclusion from the former of depreciation and the value-added of services provided by the so-called nonmaterial sector that do not contribute directly to material production.



Sources: Data provided by the Soviet authorities.

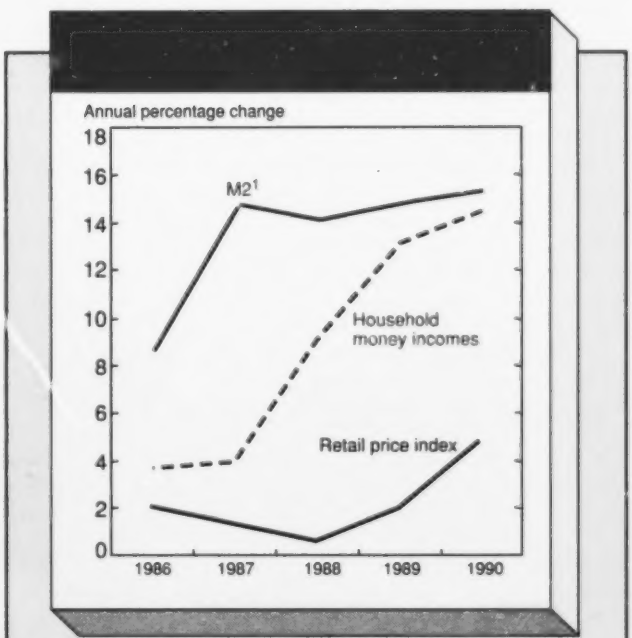
[1]This is similar, though not identical, to the Western concept of constant prices. It is widely believed that official Soviet statistics underrecord inflation, and hence overestimate real growth in both output and expenditures.



Source: Ministry of Finance, Goskomstat and staff calculations.
[1] Including extrabudgetary agricultural price support.
[2] Excluding gold. Converted at the 1989 official exchange rate of rub. 0.58=$1.

	1985	1986	1987	1988	1989	1990[1]
External debt[2]	28.9	31.4	39.2	43.0	54.0	52.2[1]
of which:						
Short-term	6.9	7.4	8.6	11.2	17.7	10.0[1]
External debt service[3]	—	7.8	8.8	8.2	9.4	13.4
(In percent of goods and services)[4]	(—)	(27.7)	(26.5)	(23.1)	(24.2)	(33.0)
Foreign exchange reserves[5]	12.9	14.7	14.1	15.3	14.7	5.1

Source: Data provided by the Soviet authorities, the Bank for International Settlements (BIS), and staff projections.
[1] Staff projections, June 1990.
[2] External debt contracted or guaranteed by the Vneshekonombank.
[3] Total debt service on debt contracted or guaranteed by the Vneshekonombank, excluding repayments of short-term debt.
[4] In convertible currencies.
[5] BIS data.



Source: Goskomstat.
[1] M2 is composed of currency, demand deposits, time deposits, and lottery bonds.

GUEST ARTICLE

Hungary's Reforms: Past and Present

An inside look at why past efforts failed to bring about a market economy

Imre Tarafas
First Deputy President, National Bank of Hungary

The first steps toward policy reforms in Hungary can be traced back to the 1950s. Following two waves of political thaw in 1953 and 1956, Hungarian economists tried to implement their ideas on the transformation of the Soviet-type centrally planned economy. But they succeeded only in mitigating the effects of the most striking distortions. No comprehensive changes could be made because of the subsequent deterioration of the political climate in the Union of Soviet Socialist Republics and, as a result, in Hungary.

The first radical reform was introduced on January 1, 1968, after several years of political, academic, and organizational preparation. The reform package included an attempt to combine central planning and market mechanisms, abolition of mandatory plan commands, moves toward enterprise autonomy, and gradual introduction of market prices and profit incentives. But ideological barriers and an unchanged political and institutional framework stood in the way of this effort. The situation was aggravated by attacks by conservative forces within the communist party leadership. As a result, the economic reform process came to a halt by 1972–74.

Despite that, the idea of the 1968 reform could not be totally banished from Hungarian public thought. Gradually, Hungary moved away from the rigid Soviet economic model. This relative freedom allowed Hungarians to enjoy better living conditions and to have a healthier domestic economy than most of their neighbors in Eastern Europe for nearly two decades. But many economic problems remained.

The oil price shock of 1973–74 should have led to further, drastic reordering of economic priorities, but this did not take place. Instead, the government chose to cushion the population against the rise in oil prices and the deterioration of the terms of trade with budgetary subsidies sustained by increased borrowing, without changing the production structure or dampening demand. The country's standard of living rose in this period, but so did its external debt. By 1978, the leadership realized that the accumulation of debt could not be sustained. But instead of restarting the reform process to revitalize the economy, it cut back on imports from convertible currency areas and encouraged export-led growth mostly by administrative measures. The deterioration of the external balance slowed down, but without the necessary improvement in efficiency and profitability.

A new wave of reform gained momentum by the 1980s, including price reforms (linking domestic prices to those in the world market), a new bankruptcy law for all types of enterprises, a two-tier banking system (i.e., a central bank and commercial banks), and a new company law. But by the second half of the 1980s, the leadership realized that the old system could not be simply improved; it needed to be changed radically. Today, we do not speak of a combination of a planned and a market economy, nor even about a socialist market economy, but about a social market economy, with a high degree of social sensitivity, along the lines of systems prevalent in Western Europe.

Previous reforms

Earlier reforms were partial and half hearted. For a variety of reasons, including political compromises and lack of synchronization between different elements of a reform package, earlier reform efforts failed to improve radically the functioning of the Hungarian economy. For example, the 1968 reform concentrated on building up a market for goods and services, but not for capital, because capital ownership and income from speculation were seen as concepts opposed to the nature of a socialist social and economic

order. The central command system—though in a somewhat indirect form—remained predominant for many investments and therefore affected structural development, as did the over-centralized, monopolistic system of enterprise organization. Individual reform measures were not part of a coherent and unified system. All these reforms were never allowed to cross political and ideological boundaries, so that they were often reversed.

The question of ownership—the central element of the market economy—was missing. In the state-owned sector, both the branch ministries and the self-governing bodies of the enterprises proved to be extremely incapable representatives of the state as the owner. In the cooperative sector, the ownership rights of the members were severely restricted by the interference of the political institutions. Earlier reforms did not tackle the issue of ownership directly. They made certain concessions for small-scale private industrial and trading activities and private agricultural production, mostly on the household plots of the cooperative farmers. Of course, many realized that the economic ills of the socialist society stemmed from the weakness of the interest of individuals. But because of the ideological barriers, no solution was found, until very recently, to the question of how to create and foster individual interest at all levels of the economy.

The root of the problem is that egalitarian tendencies have always been extremely strong in socialist countries. Generations grew up on the belief that this approach showed the moral superiority of socialist society over the capitalist one.

Radical reforms could have led to the predominance of private ownership; this, however, would have threatened political power as well. For these reasons, in the past the efficiency and incentives emerging from the creation of self-interest were always sacrificed on the altar of political power.

Another fundamental problem was the selection and behavior of managers of state enterprises in a socialist economic system. Although the executive was, in principle, selected on the basis of his managerial talents, his interests lay more in implementing the directives of his superiors than in following the imperatives of the market. Such a manager—unlike a private owner—is not sufficiently sensitive to demand, or to the future. He is less likely to have an interest in technical development or market research, and more interested in raising wages for the sake of good worker-manager relations, instead of accumulating wealth for the enterprise, or for the economy at large.

The predominance of Comecon trade. The huge captive market of the Comecon countries (also known as the Council for Mutual Economic Assistance) was not as demanding in terms of quality and speed of delivery as Western markets. This made it all very comfortable for the supplier enterprises. As a result, the structure of production in Hungary remained unchanged and the technical gap between Comecon and the Western economic system widened.

Trade with the Comecon countries grew rapidly, and this, for a long time, indirectly impaired the competitiveness and thwarted the export efforts of the Hungarian industry in the Western markets. In the Comecon trade system most of the deals were struck between governments. Once agreements had been reached between governments, companies found that they could bargain for favors from the government. They argued for subsidies, preferential credits, and other types of assistance as preconditions for the fulfillment of obligations made by the governments. This practice essentially removed the possibility of the emergence of market forces in the operation of these enterprises.

The lack of a change in the political system. Perhaps the most important reason behind the failures of the previous reforms was the fact that economic reforms were not linked to political ones. The abolition of the centrally directed system of the command economy put an end to the links with the centralized political system. But the declaration of enterprise autonomy could not produce a breakthrough in economic thinking and productivity because executive appointments continued to be influenced by political factors. Most of the economic policy decisions were based on short-term political considerations, laced with reverence for socialist values.

Political, economic, and social processes have their own logic, their own dynamics, and necessities. Thus, reforms were often viewed by the authorities as an admission of weakness; hence they tried to restrict such efforts to a minimum. It became clear that so long as decisions on economic matters and the appointment of executives remained a political issue, economic efficiency could not fully become a reality. This state of affairs concentrated substantial informal powers in the hands of the state and party bureaucrats, many of whom were unfamiliar with particular economic issues or industries.

Along with "true values" of socialism, such as free health care and education, security of being, and full employment, socialism also produced pseudo-values, such as artificially low prices of certain basic foodstuffs and services, and cheap rents. These led to shortages of commodities and of housing, and to the neglect and deterioration of the existing housing facilities. The transition to a true market economy requires overcoming the ideological taboos—for instance, that only physical and intellectual work is ethical, trade or entrepreneurship is dubious at best, and income from capital is immoral—that have taken such deep roots in public thinking in the course of the past 40 years.

Will this reform succeed?

What factors make it likely that the current transformation will continue and be successful?

The change toward a market economy is so major an undertaking that it could not be accomplished without accompanying political changes. The most important domestic political changes have already taken place. By mutual consent of those in power and those in opposition, multiparty parliamentary elections were held this spring, similar to those of the Western democracies. These changes occurred not through a coup, but as a matter of political evolution. Although Hungarian political life is characterized by keen debates, these have been contained within the parliamentary framework.

Following change in the political system of the country and as a result of the changes taking place in the Comecon countries, the international environment has also become supportive of reforms. Thus, the opportunity is now there for the establishment of the institutional system necessary for a market economy and for the introduction of privatization.

Further, the Hungarian reforms are not isolated this time. All of Eastern Europe and, what is of particular importance, even the Soviet Union, is undergoing an enormous change. Each of these countries is seeking to find the political and economic solutions best suited to its own situation.

The rearrangement of relations between them is also in progress. This implies the development of frameworks within which standardized political and economic solutions associated with Comecon are not needed any more. Moreover, it will be possible to build up economic ties, closer than before, with various organizations in the advanced market economies. The other important factor in this rearrangement of relations is that the former Comecon countries will, from January 1, 1991, settle their trade accounts without obligatory interstate agreements, based on world market prices, and with payments in convertible currencies. Although this shift will put a major financial burden on Hungary, in addition to a number of other problems, it is also expected to do away with the undesirable effects of the earlier transferable rouble trade that hindered

technical development, competition, and renewal in the past.

As a result of successive reform efforts over the past two decades, and particularly in the past two years, the basis for the establishment of a market economy has emerged in Hungary. With the command plan abolished more than 20 years ago, and the other forms of centralized direction of enterprises gradually reduced, the autonomy of the enterprises is, by now, virtually complete. Most managers have obtained the skills needed to operate in a market economy; partnerships and joint ventures are sprouting; various forms of modern financial instruments have appeared; and a taxation system, in line with those in Western Europe, has been established. Foreign trade, prices, and wages have been greatly liberalized; good progress has been attained in making the national currency convertible.

The settlement of ownership issues is important. The decision on the sale of state-owned assets has already been made. The parliament adopted the necessary legal framework and the process of large-scale privatization unfolded in the last two years. Many state-owned enterprises have established joint ventures with foreign firms and the government has launched a massive privatization program. Privatization is partly led, partly controlled by the State Property Agency. Privatization can be initiated by this Agency, by the enterprises concerned, or by prospective buyers. Privatization is a market-based process and is helped by favorable credits.

One of the most important tasks ahead is to improve the performance of state enterprises. A part of the solution is to privatize as many enterprises as possible. This, however, will take time and has certain limits. Therefore, the reform of the state enterprise sector is unavoidable and cannot be bypassed by privatization. The reform may have different forms but some basic principles should be observed: the state-owned enterprises should be run by autonomous and accountable managers like private firms and conglomerates; they should be subjected to real market forces and should be supervised by professional, business-oriented bodies, whose sole responsibility is to assure high profitability within the framework of legal regulations and business ethics.

The establishment of new private enterprises, including from the beginning of 1991 foreign trade activities and joint ventures, is completely free and requires no specific licence. At the same time more than 90 percent of imports and domestic prices will be liberalized. Special laws and a broad range of measures will ensure fair trade practices and counter monopolistic tendencies.

The state will decrease its participation in the economy: it will decrease subsidies radically and will not make any investment in the competitive segment of the economy. The financing of health, education, and housing sectors will be reformed radically.

The prospects of the political and economic changes in Hungary have been improved by the strengthening of links to Western market economies. Hungary's exports to these markets have already reached $7 billion per annum, or about a quarter of its GDP. The barriers in the way of the movement of capital and commodities are being demolished on both sides, while the transfer of technology has become easier. Hungary is seeking an early association agreement with the European Community, as a prelude to full membership. It will continue to count on the support of the international financial community and multilateral organizations in its move toward a fully functioning and successful market economy. ■

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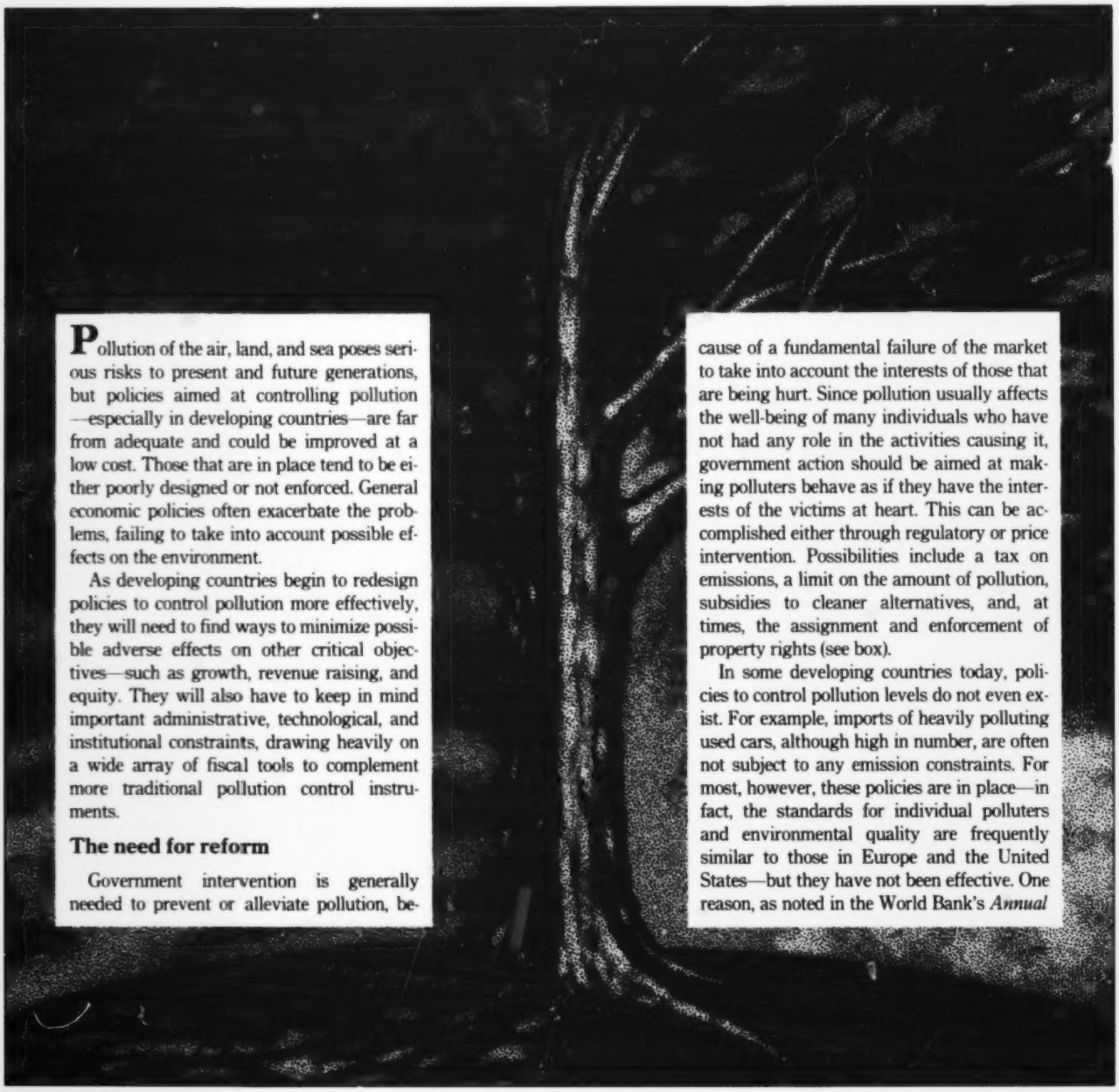
Curbing Pollution in Developing Countries

Governments need to redesign economic and environmental policies, carefully weighing how firms and individuals will respond to them

Gunnar S. Eskeland and Emmanuel Jimenez



Pollution of the air, land, and sea poses serious risks to present and future generations, but policies aimed at controlling pollution—especially in developing countries—are far from adequate and could be improved at a low cost. Those that are in place tend to be either poorly designed or not enforced. General economic policies often exacerbate the problems, failing to take into account possible effects on the environment.

As developing countries begin to redesign policies to control pollution more effectively, they will need to find ways to minimize possible adverse effects on other critical objectives—such as growth, revenue raising, and equity. They will also have to keep in mind important administrative, technological, and institutional constraints, drawing heavily on a wide array of fiscal tools to complement more traditional pollution control instruments.

The need for reform

Government intervention is generally needed to prevent or alleviate pollution, because of a fundamental failure of the market to take into account the interests of those that are being hurt. Since pollution usually affects the well-being of many individuals who have not had any role in the activities causing it, government action should be aimed at making polluters behave as if they have the interests of the victims at heart. This can be accomplished either through regulatory or price intervention. Possibilities include a tax on emissions, a limit on the amount of pollution, subsidies to cleaner alternatives, and, at times, the assignment and enforcement of property rights (see box).

In some developing countries today, policies to control pollution levels do not even exist. For example, imports of heavily polluting used cars, although high in number, are often not subject to any emission constraints. For most, however, these policies are in place—in fact, the standards for individual polluters and environmental quality are frequently similar to those in Europe and the United States—but they have not been effective. One reason, as noted in the World Bank's *Annual*

Report on the Environment 1990, is that monitoring, enforcement, and regulatory capacities have tended to be weak in these countries. In Mexico, for instance, the influence of regulations has been limited by the resources of the enforcement agency and the low level of fines. In Colombia, laws have included formulas for calculating a tax on discharges to water, but no apparatus has been in place to monitor and bill polluters. In India, inefficient legal processes have reduced the disincentive effects of lawsuits against polluters. Even in developed countries, subsidized and mandated pollution control equipment has often been ineffective. For example, a recent study of monitoring and enforcement of pollution regulation in the United States found that during the 1970s and 1980s, much more public attention was focused on getting pollution equipment in place than ensuring its proper maintenance and use.

Another reason is that pollution control policies often are not well designed, meaning that they would have been both weak and unnecessarily costly even if they had been implemented vigorously. Emission regulations, the most popular form of intervention, frequently provide no incentives for polluters to choose least-cost abatement options. In Brazil, for example, studies show that some industrial polluters could reduce emissions at much lower costs than others. Incentives—as opposed to rigid regulations—would have been able to exploit these differences by allowing polluters flexibility in finding where and how pollution can be reduced at the lowest cost. Even in industrial countries, surprisingly little use has been made of incentives, despite many studies demonstrating that savings would often be in the range of 50 to 90 percent of the costs of existing controls.

Often exacerbating the deficiencies of environmental policies is the fact that general economic policies may have environmental effects, and these are not considered when the economic policies are formed. Subsidized charges for energy (particularly fossil fuels), water, pesticides, and fertilizers, as well as selective investment incentives to industries, may be costly ways of reaching other objectives if they contribute simultaneously to pollution problems. Economic interventions must take into account whether the stimulated activities are good or bad for the environment.

Possible approaches to reform

What options are open to governments? Typically, there is a much wider range of policy instruments at their disposal than those now being systematically exploited (see table). Traditionally, analysts have proposed "direct" instruments, which attempt to correct directly for the imposition of pollution on others by, for example, levying charges, issuing permits, or setting standards based on emissions. When such constraints are source specific and nontradable, they are termed command and control, since they mandate where and how to abate. They contrast with market-based instruments, which provide abatement incentives to polluters, who can then choose among options. A long-standing theoretical result—which has also been confirmed by empirical analysis—is that taxes or tradable quotas on emissions will achieve a given emission reduction at the lowest possible cost. Abatement will be cheap if polluters face an emission tax, because only polluters with low abatement costs will choose to reduce emissions, while those with higher costs will prefer to pay the charge.

	Direct instruments	Indirect instruments
Market-based incentives:	Effluent charges, tradable permits, deposit refund systems	Input/output taxes and subsidies, subsidies to substitutes and to abatement inputs
Command and control:	Emission regulations (source specific, non-transferable quotas)	Regulation of equipment, processes, input and output
Government production or expenditures:	Purification, cleanup, waste disposal, enforcement and agency expenditures	Technological development

Note: A direct instrument addresses the level of damages or emissions directly, whereas indirect instruments work via other variables.

In addition, there are "indirect" instruments—those that are not directly related to emissions, but that nonetheless have important environmental effects, sometimes unintentionally. Public finance policies, through their impact on relative prices, will often have a strong impact on pollution. Other policies, such as those related to macro or trade balances are also potentially important.

Minimizing trade-offs with other objectives. In assessing the relative merits and design of these policy instruments, developing countries should strive to avoid, or at least minimize, potential trade-offs with other objectives, such as economic growth, revenue mobilization, and equity. This will also facilitate adoption and implementation.

Some pollution control policies may actually complement efforts to meet growth and narrowly defined efficiency objectives. For example, reducing energy subsidies to industries may lower pollution and enhance efficiency by subjecting firms to fair competition and forcing them to economize in the use of energy. Subsidy reductions, in turn, may also contribute to net public revenue, and employment may be generated if energy and labor are substitutes. Trade-offs are more likely to be avoidable if resource allocation has been extensively distorted due to past policies—the situation in Eastern Europe and the Union of Soviet Socialist Republics. Heavily subsidized prices for certain key polluting commodities could have encouraged overutilization and waste. A first step may then be to remove subsidies and move to marginal cost pricing for such items as water supply, electricity, fossil fuels, pesticides, and fertilizers.

When public budgets are tight, the case is strengthened for environmental taxes (or auctioned tradable permits) rather than regulation. Developing countries often use tax instruments to a point where distortions are very costly—export taxes discourage cash crops, sales taxes distort consumption, and so on. For them, using pollution control instruments that generate revenue would be particularly useful, since this would enable governments to lower other tax rates. While pollution taxes are only a fairly recent innovation and not yet significant in terms of general revenue, a recent study by the Organization for Economic Cooperation and Development shows that environmental taxes have been a significant source of funding selected environmental expenditures in developed countries. The magnitude of the revenue potential of pollution-related taxes in developing countries still has to be seen in practice. But since fuel constitutes 10 to 20 percent of imports for many, there is no doubt that taxation of fuels—which could then be motivated by environmental, as well as fiscal objectives—holds substantial revenue potential. Some countries where intensive pesticide use is subsidized at

a rate of 44 percent of retail cost could save hundreds of millions of dollars per year and reduce health risks as well.

The possible trade-offs with equity and efficiency also have to be assessed, especially when the major expenditure items and revenue sources of poor households are concerned. Often, these trade-offs can be avoided altogether. For example, on the production side, many studies of individual industries have estimated that energy and labor are substitutable, indicating that price-induced energy efficiency can increase employment and labor income. On the demand side, many studies indicate that the use of petroleum fuels (except possibly kerosene) and electricity vary greatly with income levels in developing countries, making these potential tax bases for distributive reasons, too. If a policy has adverse consequences for the poor, it can still be attractive if there is scope for compensating measures, such as lowering the price for other essential items.

Adjusting to administrative and technological constraints. These constraints are likely to be different, at least in degree, from those confronted by developed countries. In particular, one must take into account the government's ability to monitor pollution damage and enforce regulations. For direct instruments to be effective, the regulator has to be both technologically capable and sufficiently accountable to withstand pressure from interested parties, since policy instruments based on environmental monitoring have monetary implications for the polluters.

The theoretical case for market-based instruments (such as effluent charges or tradable emission permits) is very strong, as these exploit information held by the polluters to seek out the cheapest ways to reduce pollution. Under such a regime, polluters facing high costs of pollution abatement would prefer to pay the charges, while those facing lower costs would prefer to avoid the charges by reducing emissions. Command and control measures cost more because the regulator must decide where and how emission reductions should take place. The theoretical case for direct rather than indirect instruments is also strong. Actual monitoring of emissions allows perfect incentives for all actions that can reduce emissions, whereas indirect instruments can only imperfectly mimic such an incentive scheme. For example, a fuel tax can act as an effluent charge in the absence of continuous emission monitoring, but it will only imperfectly mimic a tax on actual individual emissions. In particular, it will fail to induce any actions that can reduce emissions per unit of fuel consumed (such as installation of filters and catalytic converters).

But in the real world, monitoring each polluting source (and enforcing taxes or regulations related to such monitoring) is often costly or impossible, and thus it might be more effective to use selective taxes or regulations to stimulate pollution control indirectly. Such policies could include subsidies to pollution control equipment and public transport, taxes on polluting inputs, and noneconomic regulatory approaches (e.g., fuel efficiency standards). These indirect instruments can often be implemented without reliance on technically and institutionally vulnerable monitoring and enforcement functions.

The problem, of course, is not only a question of technological feasibility but also whether institutions are strong enough to cope with pressure from special interest groups and corruption. Indirect instruments may thus be more efficient even though, for instance, fuel consumption is only an imperfect indicator of emissions. Moreover, these measures—whether they be taxes on polluting inputs, or take the form of tax concessions and subsidies to low-polluting products and processes—can be administratively easy to carry out if they can be grafted onto existing systems of indirect taxation.

It may turn out that for some activities, emissions and damages are affected mostly by inherently unobservable actions, such as whether combustion machinery is adjusted and used carefully. Under such circumstances, there will often be no good substitute for monitoring emissions. In general, however, policymakers will be able to find appropriate indirect instruments, and the key in their use will be the identification of polluting sectors and instruments affecting their mode of operation. For instance, if household use of energy is found to be a major contributor to pollution (as in Ankara and Beijing), changing the availability or relative prices of alternative energy sources will probably be the major instrument. In addition, some improvement may come from reducing the consumer prices of selective appliances (e.g., improved ovens and stoves).

One weakness of indirect instruments such as fuel taxes or subsidies to less-polluting equipment may be undesired incentive effects and distortions in behavior. A fuel tax, for instance, treats all users of the fuel as if they pollute equally per unit of fuel. The cement industry, which retains practically all the sulfur content of its fuels, would then be taxed at too high a rate, and its use of high-sulfur fuels would be unnecessarily discouraged. The problem could be overcome, however, by instruments that differentiate according to user characteristic, if they are not too costly to administer. In the above example, sulfur taxes paid on fuels could be refunded when regulators are convinced that the shipment was used in cement production.

Taking the institutional dimension into account. A major issue here is jurisdictional—whether it arises because the desired tool for pollution control is national (possibly a gasoline tax) while the problem is strictly local, or because a municipality or state is polluted by activities outside its authority. A good example of the latter would be Paraíba, the river that runs through Rio de Janeiro from São Paulo. A solution would be to give responsibility for water quality to a higher federal authority that would monitor discharges and enforce regulations affecting

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The environment could be effectively protected through a reassignment of property rights—giving the rights of clean air and water to consumers and letting them sell as few or as many pollution permits as they like. But one problem with this approach is that without monitoring, enforcement of rights to open access resources such as clean air and water is virtually impossible; polluters will have all rights *de facto*. Another problem is that since everyone can enjoy the general air quality, each individual will have excessive incentives to sell the rights to polluters. Thus, pollution rights must be sold collectively, not individually.

Under special conditions, polluters and victims can negotiate socially optimal pollution levels without government intervention. According to an argument attributed to economist Ronald Coase, as long as negotiations are not too costly and bargaining works, these levels can be achieved, regardless of the initial allocation of rights. For example, in the Philippines, soil sediments caused by a single logger threatened tourism development in a bay. In such a case, direct negotiation between polluter and victim would have been feasible. Similarly, transborder pollution issues between two sovereign nations, such as acid rain, are often resolved without the involvement of a supranational governing entity. But this solution tends not to be efficient when a large number of people are involved and information about their stakes is imperfect. In Mexico City, air pollution from 30,000 industrial firms and 2.6 million motor vehicles affects 20 million inhabitants.

them. The constitution, however, gives the states this authority, and it remains to be seen whether negotiations between the two states can induce abatement within São Paulo in order to benefit Rio.

Another concern is the ability and willingness of governments to take firm actions when the interests of strong and influential private groups are put in jeopardy. Many analysts argue that industrialized countries have chosen costly environmental regulation rather than more efficient instruments because established industries are favored, while costs are born by unorganized consumers and potential competitors. In developed and developing countries alike, excessive depletion of resources, such as forests, is often explained by the fact that well-placed groups can take advantage of such exploitation, while the benefits from sustainable management would go to others.

Conclusion

In a country facing severe revenue constraints and a weak institutional framework, much of the pollution control work in the early phases should be done by taxing fixed inputs (e.g., combustion machinery) and variable inputs (e.g., fuels), according to the level of expected emissions. These instruments may be more effective than traditional regulatory approaches, which rely heavily on monitoring and enforcement. Moreover, they should contribute to—rather than burden—public budgets. Indeed, studies performed in developed countries clearly show that an extensive regulatory framework brings little relief if the combined effect of monitoring, enforcement, and the size of penalties does not support compliance. An indication that developing countries must deal with the same constraints comes from the mixed experience with efforts to enforce regulations on safety standards and overloading of motor vehicles. The stakes for the involved personnel are very high and the task is immense.

Although we have focused primarily on local or national pollution problems, the same principles apply to transnational issues. When several nations are involved, agreement about emission levels will have to come about in the context of negotiations, with international transfers playing a facilitating role—as is the case with the recently established global fund to help phase out the use of chlorofluorocarbons (CFCs) in developing countries (see article on page 24 in this issue). Each nation, in turn, will then have to find the most cost-effective way of dealing with the problem within its own borders.

Recommendations about how to intervene depend heavily on assumptions regarding behavioral responses, and a common one is the assumption of competitive behavior. This, of course, warrants some caution, especially since in many developing countries, the role of prices and competition is often not clear. For instance, when prices are controlled, or the firms involved are parastatals, this should be taken into account. Another cautionary note is that the benefits and costs of pollution abatement are often uncertain, and policy recommendations may hinge on which type of uncertainty is more important. Carefully thinking through how individuals and firms will respond to policy instruments holds the potential to greatly reduce the costs and enhance the efficiency of intervention, in turn determining the affordability of environmental protection. ■

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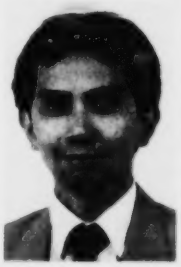

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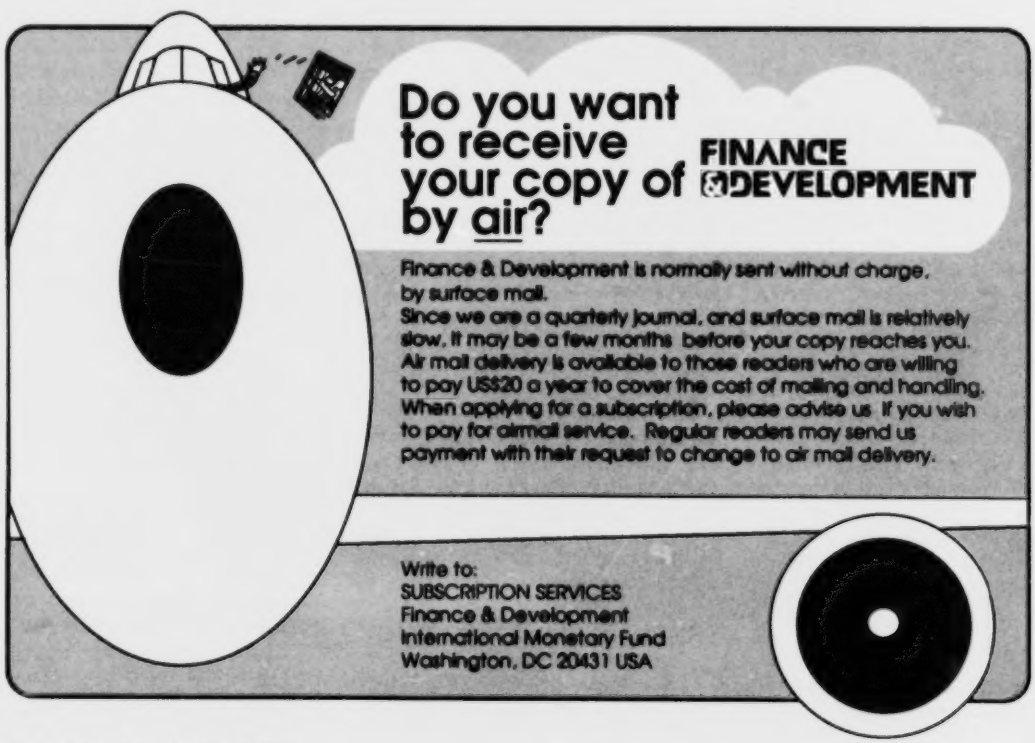
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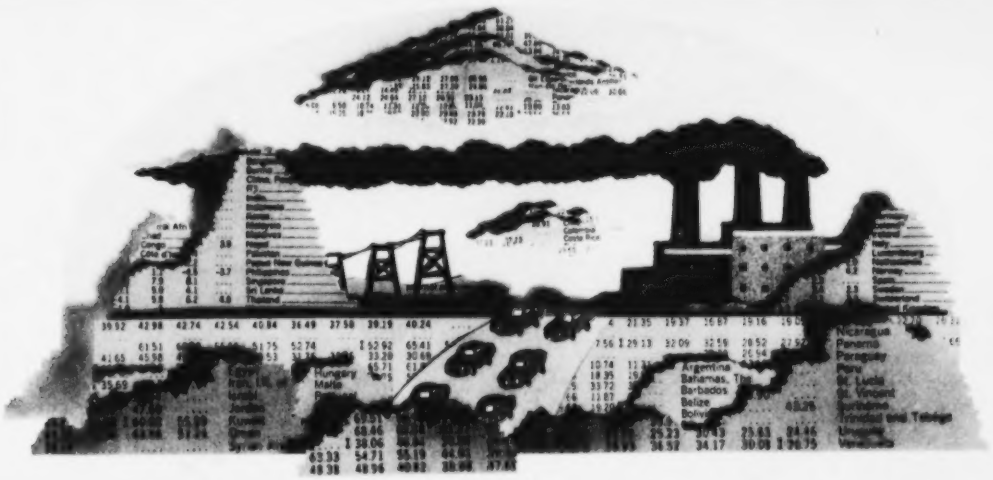

Accounting for the Environment

An improved way of preparing national accounts could help achieve more sustainable development

Ernst Lutz and Mohan Munasinghe

Measuring the effects of the interaction between the environment and development recalls the conundrum: If a tree falls in the forest and no one hears it fall does it make a noise? Increasingly, economists have been attempting to include not only fallen trees but also other natural resources in their calculations of national products and incomes. The reason is that current national accounting systems do not capture the value of natural resources adequately and, therefore, development strategies that rely on standard income accounting techniques may not result in sustainable development.

With the rise in awareness of environmental issues in the 1980s, attention is now turning to the need to better understand the value of environmental resources and services and to improve the current United Nations System of National Accounts (SNA) to account for the environment in income estimation. Improved measurement of economic performance should in turn lead to better economic decisionmaking. National authorities and multilateral institutions, such as the United Nations, the International Monetary Fund, and the World Bank, among others, are seeking to address this need. This article traces the rise of this consciousness and the work being done by World Bank staff in this direction.

In conducting economic analyses, measuring economic performance, and directing public policy, the Bank as well as its member countries rely heavily on the major aggregates shown in the national income accounts, compiled in accordance with the United Nations' SNA. The current SNA, published in 1968, emphasizes GDP. The GDP is a useful measure, mainly of market activity (although it includes some estimates of nonmarketed goods and services), and is an important indicator for macromanagement of an economy. But it has increasingly met criticism, mainly because it takes no account of consumption of natural capital and, therefore, is seen to discourage the implementation of policies that result in sustained development. The SNA framework does not provide for measures such as a net domestic product (which takes account of depreciation of man-made capital). A few countries actually calculate an NDP, but this measure, too, does not capture the loss or depletion of national environmental resources.

Deficiencies

The existing SNA is contained within a well-defined receipt and payment framework that generally relies on market prices. But some of the effects of degradation, pollution, and waste disposal, together with their repercussions on society, cannot be captured by market-based information and standard accounting techniques. Thus, the challenge is to capture these effects statistically and to link them to economic activities.

The deficiencies in the ability of the current national accounting framework to take natural resources and the environment into account arise, in part, out of an inconsistent treatment of man-made and natural capital. There are three specific shortcomings:

- Natural and environmental resources are not included in balance sheets; national accounts, therefore, represent limited indicators of national well-being, since they measure poorly—or even "perversely"—changes in environmental and resource conditions;
- Conventional national accounts fail to record the depreciation of natural capital, such as a nation's stock of water, soil, air, nonrenewable resources, and wildlands, which are essential for human existence.
- Cleanup costs (e.g., expenditures incurred to restore environmental assets) are often included in national income, while environmental damages are not considered. For private firms, defensive environmental expenditures (i.e., measures to reduce or avoid environmental damage) are netted out of final value added. In contrast, such cleanup costs are considered as productive contributions to national output if they are incurred by the public sector or by households. The calculation of GDP is distorted in two ways—undesirable outputs (e.g., pollution) are overlooked and beneficial environment-related inputs related to environmental needs are often implicitly

Norway

Norway probably has the longest-running interest in environmental and resource accounting. The intent of the Norwegian system is not to provide a better measure of true income and make possible adjustments to GDP, but to assist the government in making decisions on managing resources that are economically and politically most important.

The resource accounts include petroleum, minerals (iron, titanium, copper, zinc, and lead), forest products, fish, and hydropower. Accounts for mineral resources exist for only a few selected years, while forest statistics have been available since 1970, and those for fish, since 1974. The environmental resources accounts are confined to land-use statistics, the discharge of selected air pollutants, and two water pollutants. The coverage of the Norwegian resource accounts could be expanded to cover other resources, but cost-benefit considerations have so far not encouraged such a move.

United States

Environmental and resource accounting in the United States has so far been limited to the collection of data on pollution abatement expenditures. Before 1989, the Bureau of Census undertook a survey of about 20,000 establishments in the manufacturing sector, while the Bureau of Economic Analysis drew its data from a survey of about 9–14,000 firms in both the manufacturing and nonmanufacturing sectors. Since 1989, only a sample of 600 firms has been surveyed.

Because of a strong lobbying effort by environmental groups, the calculation and publication of a measure called "gross sustainable productivity" was made a requirement for the Commerce Department (Public Law 101–45, June 30, 1989). Also, the bill requires the Secretary of State to instruct the United States representatives to the Organization for Economic Cooperation and Development, the United Nations, and the multilateral development banks to seek revisions to the current accounting systems to take into account the depletion or degradation of natural resources. One problem with the proposed measure is that it has not been clearly defined, and even if agreement on the definition were reached soon, sizable resources might be required for data gathering and estimation of the new measure.

France

For a considerable time, French experts have been trying to set up a system known as "patrimony accounting." The system is expected to be comprehensive, consisting of seven levels, starting from specific resource data at level one to aggregate welfare indicators at level seven. The intent is to analyze and describe the natural environment in its three basic functions: economic, ecological, and social.

While a lot of thought has gone into the development of patrimony accounting, very limited resources have been available for its implementation, which is why the process has been slow. So far, it appears that the empirical side of this approach has mainly concentrated on the establishment of resource accounts similar to those established in Norway.

valued at zero.

These deficiencies point to the need for an accounting framework that addresses the preceding concerns and permits the computation of measures such as an environmentally adjusted net domestic product (EDP) and an environmentally adjusted net income (ENI). Such measures would attempt to better account for the depreciation of both man-made and natural capital, exclude relevant categories of defensive environmental expenditures, and estimate damages to the environment as a result of economic activities.

Taking into account depreciation of natural capital and calculating an EDP would likely result in a lower level of measured income and perhaps also a lower growth rate. While other methodological approaches could be used, the results of the World Resources Institute are illustrative of how adjusted national income figures might differ from traditional ones. They calculated depreciation for oil, timber, and top soil for Indonesia and found that the growth rate of the adjusted NDP for the period 1971–84 was only 4 percent compared to GDP growth of 7.1 percent.

There are differing views on whether defensive expenditures should be deducted from GDP in order to come closer to a sustainable income as defined below. Generally, progress toward a new accounting framework has been slow. Reasons for this include conceptual and measurement difficulties, as well as uncertainties about the benefits of gathering additional data relative to its costs.

Background to SNA

The foundations of the current approach to national income accounting were laid about half a century ago, when the world's population and the size of the world economy, as measured by GDP, were much smaller. Consequently, the emphasis on natural resources and the environment was much less at the time, and it is understandable that better treatment of natural resources and the environment in the SNA was not a major concern. Yet, some of the early literature that provided the intellectual underpinning of the SNA anticipated the importance of natural capital and helped to define broad concepts of "true" income that were not limited to output derived from man-made capital.

Sir John Hicks defined the concept of income as follows: "The purpose of income calculation in practical affairs is to give people an indication of the amount which they can consume without impoverishing themselves" (John R. Hicks: "Value and Capital," Second edition, Oxford University Press, Oxford, UK, 1946, p. 172). The same basic idea holds at the national level. True income is a practical guide to the maximum amount a nation can consume without depleting its stock of assets in the future. This would be true to the extent that allowance is made for depreciation of capital (or productive assets), broadly defined. Clearly, GDP, or even NDP as computed under the existing SNA, is not consistent with the spirit of the above definition by Hicks, and hence the urgent need to re-evaluate the SNA.

The Bank and SNA

Based on its work since 1983, the Bank has actively encouraged the inclusion of environmental issues in the current revision of the SNA and proposed as an interim measure that a set of environmental "satellite" accounts be created to accompany the SNA framework. This proposal was accepted by the SNA expert group meeting in January 1989. The revised "Blue Book" of the SNA (expected to be issued in 1993) will include a discussion on this issue and justify the need for satellite accounts that permit income computations that take environmental concerns into account.

The Bank has surveyed the experience of industrial countries with various environmental and resource accounting approaches to see what lessons could be learned for developing countries to better deal with environmental issues in accounting (see box).

Some of the Bank's current research in this area, carried out jointly with the United Nations Statistical Office (UNSO), is being conducted in two developing countries—Mexico and Papua New Guinea. The UNSO Framework being used in these studies is a

system for environmentally adjusted economic accounts (SEEA), which derives EDP and ENI. It tries to integrate environmental data with existing national accounts information, while maintaining SNA concepts and principles as far as possible. The challenging empirical question is the extent to which it will be possible to actually value environmental assets and flows of services from them.

By expanding the SNA to SEEA, the total coverage of productive assets has been increased by adding environmental assets (such as soil, wildlands, and biodiversity) as stores of wealth, provided they are linked to economic activities. Similarly, additional costs related to the environment (e.g., cleanup expenditures by government) are also included in the system. These costs are directly related to productive activities and the generation of value added, and include:

- imputed charges for the depletion of minerals and other natural resources; and
- costs of degradation of land, water, air, and so on, as a result of productive activities.

Such costs, in addition to the depreciation of man-made capital, are deducted from GDP to arrive at the EDP. This EDP does not include damages that are unrelated to productive activities (e.g., natural disasters, naturally occurring erosion, and so on), but they, nevertheless, affect well-being through changes in assets (as a store of wealth). Further, as tentatively suggested in the UNSO Framework, these costs would be reflected in an environmentally adjusted net income (ENI). To arrive at ENI, the following five items would be subtracted from EDP:

- environmental protection expenditures of government and households, which are treated as final expenditures in the SNA;
- environmental effects on health and other aspects of human capital;
- environmental costs of household and government consumption activities;
- environmental damage from capital goods that are discarded; and
- negative environmental effects in the country caused by production activities in other countries (negative entry), and negative environmental effects transferred abroad (positive entry). In the case of beneficial effects transmitted across borders, the signs would be reversed.

Conceptually expanding the SNA to an SEEA as outlined above is relatively easy; the difficult part would be to produce actual estimates. Where the estimation work is undertaken, the satellite accounts will provide the countries with considerable flexibility in calculating EDP, ENI, or other selected aggregates. Aside from the explicit suggestions contained in the UNSO Framework (and the forthcoming UNSO handbook), countries may wish to adopt certain specific methods and compute their own indicators.

It should be noted that while flexibility at the experimental stage is desirable, there is obviously a trade-off with comparability across nations, which is needed for cross-country analyses.

One of the options with which countries may experiment is the user cost approach. Under this approach, the revenue from the sale of a depletable resource (net of extraction cost) is split into a capital element, or user cost, and a value-added element, or "true" income. The capital element is considered asset erosion and is therefore not included in GDP. A formula for determining the size of the capital element has been proposed by the Bank's Salah El Serafy. According to this approach, the larger the current annual exploitation of the resource is in comparison with the known reserves, the larger the user cost and the smaller the income component. Complicating issues regarding this approach are the size of the discount rate to be used in the formula and the size of the proven reserves (which may actually increase over time, as in the case of oil during the last few decades).

In estimating the depreciation of capital in a broad sense, it is already clear from the initial work on Mexico that all kinds of assets could be considered, but with various degrees of difficulty. For example, capital that might be considered includes subsoil assets, forests, fisheries, soil, water, air, biodiversity, and historical monuments. However, data availability and reliability of estimates in such cases will clearly be very difficult and may not be consistent for the various categories.

The Bank is of the view that, at a conceptual level, there is a need to have a broad framework that can handle all kinds of capital (or productive assets). At the practical level, a pragmatic approach would be appropriate, which would suggest seeking initial agreement for appropriate treatment of certain expenditures (e.g., those incurred by governments) to protect the environment and marketable subsoil assets. One could leave other, more difficult areas to be incorporated after further research. In the meantime, while this work proceeds, and until firm conclusions have been reached, users of conventional national income aggregates, such as GDP, should keep the limitations in mind and use supplementary environmental information as far as possible to obtain a more balanced picture.

The World Bank has already published one compendium volume on environmental accounting (see box on related reading). It is planning to prepare a second containing the UNSO framework, the results of the case studies, the survey of environmental accounting approaches in industrial countries, and other relevant papers. Based on the experience of the case studies, the UNSO plans to further develop its draft handbook into a useful guide for countries wishing to deal better with environmental and natural resource issues. ■

A volume on environmental accounting was published by the Bank under the title: *Environmental Accounting for Sustainable Development* and edited by Yusuf Ahmad, Salah El Serafy, and Ernst Lutz, $10.95. A survey of industrial countries' experiences, prepared by Henry Peskin with Ernst Lutz, under the title "A Survey of Resource and Environmental Accounting in Industrial Countries," as Environment Working Paper No. 37 (August 1990), the UNSO Framework paper "Integrated Environmental and Economic Accounting—Framework for an SNA Satellite System," by Peter Bartelmus, Carsten Stahmer, and Jan van Tongeren, and a paper by Mohan Munasinghe and Ernst Lutz entitled "Environmental-Economic Evaluation of Projects and Policies for Sustainable Development," Environment Department Working Paper No. 42, January 1991, are all available from the Environment Department, World Bank, Washington, DC 20433, USA.

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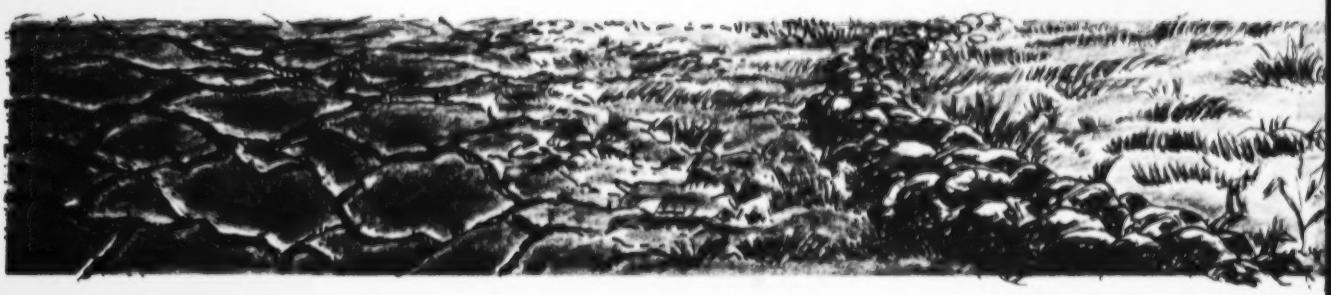

Managing Drylands

Instead of trying to stop the advance of deserts, we must improve use of drylands as part of a balanced long-term program

Ridley Nelson

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The popular image of "desertification" is of a world being engulfed by advancing sand at an alarming rate. However, the evidence suggests that, while there are parts of the arid and semi-arid areas of the globe where such events occur, advancing sand is not the main problem. The main problem is the far less dramatic, but much more widespread, deterioration of soil and vegetation in areas that are often one zone away from the desert fringe itself, and where population pressure has built up faster than agricultural technologies have been able to adapt. It is uncommon for such areas to be overcome by shifting sands, as indeed it is quite uncommon for the deserts themselves to feature active dune systems.

The distorted popular image of desertification, while generally not accepted by serious scientists, has contributed to excessive attention by public administrators on generally uneconomic interventions aimed at stopping mobile sands. This sometimes has been at the expense of more economic efforts to solve the broader problem of land degradation in dry areas. Such efforts to counter degradation increasingly feature a wide range of measures, including policy change, technology improvement, and local participation. The need in developing viable projects is to understand the underlying causes of dryland problems rather than their superficial symptoms and, particularly for the low-income countries, to allocate scarce resources efficiently across the full range of agroeconomic zones.

Defining desertification

Desertification can be defined as a loss of land resilience in dryland areas caused, at least partly, by man. (Resilience is the ability to bounce back to previous levels of production when better rainfall returns.) It is extremely hard to measure, because in dry areas, periods of both below average and above average rainfall can persist for as much as 10 to 15 years. The "green" boundary of the Sahel, as seen by remote sensing satellites, pulsates. It advances and retreats in any one location by as much as 200 kilometers between years. To pick up a trend of average desert advancement, such as the 7 kilometers per year often quoted for the Sahel, would take about 30 to 40 years of good data. A number of the earlier reports of irreversible desertification in the Sahel are now believed by some to have been unduly influenced by the fact that the ground observations were made in only a few locations and toward the end of a long dry period. Selecting the base year for comparison is particularly difficult; these areas may never reach a condition of "equilibrium." For example, parts of the Simpson Desert in Australia saw an increase in the growth of bush vegetation in the mid-1970s due to an unusual sequence of high rainfall. Such bush, having become established, is likely to mature, age, and die over a period of 70 years, creating an "abnormal" vegetation for over half a century. What should be defined as "normal" under such circumstances?

The true causes of land degradation and the loss of resilience in dryland areas are often elusive. Clearly, too many people and livestock extracting nutrients from too little land is one factor in reducing the important protection of vegetative ground cover, but usually it is a far more complex story than that. Often it is highly location specific. The challenge is to reach past the superficial "trees gone *ergo* plant trees" syndrome and focus on the opportunities for improved production and resilience, rather than on the negative approach that concentrates on stopping the advance of deserts, real or imagined.

Improving drylands

A fundamental question for a poor country is the level of investment that can be justified in dryland areas. Probably, on efficiency grounds, only rather modest levels of investment can be justified. The maximum incremental benefits achievable from investments in dryland areas are generally quite small and also highly variable relative to areas with higher rainfall. A perfectly valid dryland strategy in some countries could even be to concentrate most investments in the less dry areas and rely on growth in those areas to reduce the need for reliance on the more marginal areas, which are poorly suited to productive activities. Some middle-income countries, for example, Tunisia, have already seen a reduction in the population pressure in arid areas due to growth of other sectors, although initially, this can lead to increased degradation, as intensive agriculture structures, such as terraces, break down.

There might be a case for substantial investment in dryland areas on equity grounds, but the correlation between poverty and aridity is not clear. In fact, in the Sahel, one study suggests that people in the driest zone have greater resilience to drought through various adaptive strategies than those in the less dry zone.

The sensible investment approach, which the Bank is currently following, is to commit modest, but important, amounts of financing to foster the creation of a wide range of economic opportunities in drylands. The three keys to progress, reflected in the new strategy to counter land degradation, are technology, policy, and the participation of

affected persons.

Technology. Lack of technology remains a serious problem in areas with less than 800 millimeters of rainfall a year. In these areas, a rural family needs a wide range of agricultural technologies that it can adopt fairly flexibly. The reality is, however, that as one passes down the climatic gradient from land with higher potential to dryland areas, alternative technologies are less likely to be available in drier areas. Available economic options are reduced further by high transport and other costs that are a rational response to the low productivity of dryland areas. Also, a package of technologies that may be suitable in one year may turn out to be wrong the next under a different rainfall pattern.

Under such variable climatic conditions even research itself becomes difficult because of the changing impact on experiments of differing rainfall patterns. It, therefore, becomes particularly important in drylands to offer alternatives in the form of a menu of approaches for the farmer to select from depending on the way the season progresses. Some work in West Africa has been done on seasonal rainfall forecasting on the basis of rain patterns at the beginning of the season to help in the formation of such technology menus.

Perhaps the most promising technology in areas that produce rainfed crops is the use of low-cost moisture conservation techniques that combine contour farming, leaving a ridged pattern on the soil surface, with dense rows of vetiver grass planted on the contour or, alternatively, rows of stones. The aim is to slow surface water movement and, through improved percolation, increase the moisture available to the plant. The World Bank has been in the forefront of a shift toward such low-cost techniques for soil and moisture conservation. In pastoral areas we have rather little to offer to substantially raise productivity within the traditional grazing system. However, there are some intriguing hypotheses about the positive impact on rangeland condition and productivity of very intensive management systems, which are being followed by a number of ranchers in the United States. These systems alternate short grazing periods for large numbers of cattle in fenced paddocks with longer, but variable recovery periods, and include careful, almost daily, monitoring of forage. Such systems, it is claimed, improve sustainability because hoof action disturbs the soil and encourages reseeding, and because heavy, short duration grazing cleans up dead matter that can inhibit further growth. They also ensure that recovery periods are precisely matched to the changing rates of seasonal growth. Such intensive management is a tall order in a situation that involves communally owned rangelands; for example, the Bank-financed Kenya Baringo Semi-Arid Areas Project found it impractical to initiate this approach.

The biggest challenge with technologies in dry areas—apart from the obvious one, that plants do not grow without water—is that the Bank and other development agencies are trying to assist families who not only cannot afford to place a high value on anything beyond the short term because of their poverty but are also highly risk averse in an already highly risky environment. Their problems are exacerbated by a low level of services, such as extension and rural infrastructure, because these families live in low population density, low productivity areas, and this raises their costs, and hence investment risks, still further. Nevertheless, the right technology at the right level of investment can give good returns. A project in Burkino Faso supported by OXFAM, aimed at developing a contour cultivation system using stone "bunds" or small retaining walls placed on the contour, yielded an economic rate of return of over 30 percent.

Policies. Certain types of agricultural policies may be extremely detrimental to sustainable dryland management. For example, in the Sudan, large-scale mechanized farmers have, for many years, been receiving a tractor fuel allocation on a cultivated hectare basis at a very favorable exchange rate. Therefore, land that is totally exhausted from many years of cropping often does not get rested soon enough. Provided some sort of rough cultivation can be shown to the inspector, a fuel allocation can be obtained and surplus fuel can be sold on the unofficial market at a good profit.

"Getting the prices right" may not always help sustainability in dryland areas. In the Sudan, it is unclear whether a higher price for sorghum would reduce water and wind erosion. It would raise the incremental benefits from a given level of investment in soil conservation, but it would also encourage both expansion of cultivation into more marginal areas and increase the gap between fallow periods thus depleting the soil. Another important policy measure is land legislation. In pastoral areas there may be a need for legislation to assign more secure legal land rights to groups of people who have been able, in the past, to manage rangelands without too much irreversible degradation, but who now are under increasing threat from outsiders. In many such areas, "land grabs" by outsiders are proceeding at an alarming rate.

Participation. Involving local people in designing strategies is perhaps the key to developing a successful and sustainable project. This has been an important element in Bank projects in West Africa, in the OXFAM Yatenga Project and other Bank projects in Burkina Faso, and in the Kenya Machakos Soil Conservation Project, supported over the years by a number of different donors. The increasingly well-developed procedures of Rapid Rural Appraisal provide a useful framework for establishing such participatory approaches. This involves local populations in the early discussions and design of projects. However, it is important to retain within that framework some rigorous analysis of the technical options. This approach has been fostered by the International Institute for Environment and Development, the Ford Foundation, and the Aga Khan Foundation, and has been refined and adapted in the field by local nongovernmental organizations, such as MYRADA in India.

Finally, if there is one underlying principle in designing interventions in dryland areas facing land degradation, it is that projects should pursue the maintenance of resilience in both the land resource and the people. This is perhaps hardly surprising since it is precisely such resilience that plants and animals of arid and semi-arid areas have shown by living in such harsh climates. But it is worth remembering also that migration has not been spurned by animals, or even plants, as one option in a survival strategy. ■

The Global Environment Facility

As industrial and developing countries, alike, assess the state of the global environment, it is becoming quite clear that a number of critical problems—the threat to the ozone layer, the "greenhouse" effect, the loss of biodiversity, and ocean pollution—cannot be addressed by nations in isolation. The primary responsibility for these problems still rests with the industrialized nations. But the developing ones will increasingly contribute to global air and water pollution, deforestation, and degradation of biological resources as their economies expand, and they will need assistance in taking steps to protect the "global commons."

But what is to be done when a country must bear the costs for environmental protection, while the benefits accrue to the global community? Under certain circumstances, might not there be a need for concessionary financing? The establishment of a separate facility to do just that was proposed by France—supported by Germany and others—at the joint IMF-Bank Development Committee discussions in 1989. As a result, 25 developed and developing nations agreed in November 1990 to establish a Global Environment Facility (GEF), which would be run jointly by the Bank, the United Nations Development Programme (UNDP), and the United Nations Environment Programme (UNEP). Starting out with initial commitments of about $1.5 billion, the GEF should be operational by mid-1991.

What it will do

The goal of the three-year pilot program is to provide modest resources to help finance programs and projects affecting the global environment, and to do so in a manner that explores how developing countries can deal pragmatically with these issues, at low cost, and without impeding development. It is hoped that by moving quickly on establishing the Facility, valuable insights will be gained that can help accelerate the translation of the objectives of emerging global conventions into action, as well as provide useful input into the deliberations of the June 1992 UN Conference on the Environment and Development in Rio de Janeiro.

Four areas have been selected for the operations of the Facility:

• *Protecting the ozone layer.* There is a consensus in the world's scientific community that the present levels of chlorofluorocarbon (CFC) emissions, halons, and other gases, contribute significantly to a deterioration of the ozone layer in the stratosphere, which acts as a shield against harmful ultraviolet radiation. Developing countries will be assisted to make the transition from CFC use and production into available substitutes and alternatives. The GEF's work in this area will be coordinated with the implementation of the Montreal Protocol to phase out the use of these harmful substances to protect the ozone layer.

• *Limiting "greenhouse" gas emissions.* Although uncertainties remain, there is enough knowledge to justify immediate action to slow the emission of gases that produce the so-called greenhouse effect, such as carbon dioxide, CFCs, and methane. Areas for action include the adoption of cleaner fuels and technologies in the energy, agriculture and industry sectors, as well as some reforestation and forestry conservation.

• *Protecting biodiversity.* The variety of ecological systems and diversity of species contribute a wide range of goods and services, including harvestable material that can be used for medicines or industrial products, genetic resources for food production, and the regulation of climatic and rainfall patterns. Yet many of these now face disruption or even extinction. The developing countries still boast the richest remaining sources of biodiversity, and the GEF will support efforts to preserve specific areas.

• *Protecting international waters.* Transboundary pollution and water regime changes affect both the marine environment and bodies of fresh water that are a common resource for more than one country. The Facility will support programs to enhance contingency planning for marine oil spills; to abate industrial and wastewater pollution that affects international marine and freshwater resources; to improve reception facilities for removing ballast from ships in ports; to prevent and clean up toxic waste pollution along major rivers that affect international water courses; and to conserve unique water bodies.

How it will work

All developing countries with UNDP programs and that have a per capita GNP of $4,000 or less in 1989 will be eligible for GEF funding for investment projects and the full range of associated support. While most projects will be country-specific, some regional projects (e.g., biodiversity in adjacent areas in two countries) will also qualify. These projects will be put into three groups to ensure that there is a clear distinction between GEF and regular development programs and projects.

• Type 1: The project is justified on economic grounds and has an acceptable rate of return, but the country would not proceed without GEF involvement. Such a project will be eligible for GEF financing only in exceptional circumstances.

• Type 2: The overall rate of return of a project is not attractive enough for the country to undertake it, but such a project would have substantial global environmental benefits. Concessional assistance may help the country undertake the project thereby ensuring global benefits.

• Type 3: The investment is justified in domestic terms, but the country would need to incur extra costs to produce additional global benefits.

In addition, to qualify, projects must (1) be consistent with global environmental conventions; (2) be consistent with the country-specific environmental strategy or program; (3) use appropriate technology; and (4) be both cost-effective and of high priority from the global perspective.

The three agencies (UNEP, UNDP, and the Bank) will develop joint work programs of investments, scientific and technological support, and technical assistance using these guidelines.

The GEF will be composed of a core fund, to which contributions (on a voluntary basis and in convertible currencies) may be made in the form of grants, and a joint financing agreement funded through concessional loans or grants provided on a bilateral basis to cofinance activities supported by the core fund. The donor countries are expected to include: Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, Spain, Sweden, Switzerland, the United Kingdom, and the United States—most of which have already confirmed their participation. In addition, contributions are expected from several developing countries, who will also be invited to attend the proposed six-monthly review meetings of participants. For most of the operations, the recipient will be expected to cover a small portion of the local costs, a recognition that the country is also a partial beneficiary. ■

Will Debt Reduction Increase Investment?

A study on the Philippines supports the theory that a country's external debt burden adversely affects the rate of private investment, highlighting the benefits of debt reduction schemes

Eduardo Borensztein

The poor investment and growth performance of the highly indebted countries in the past few years is frequently attributed to the burden of their foreign debt (a high ratio of external debt to GDP), a phenomenon known as the "debt overhang." According to the debt overhang hypothesis, the accumulated debt acts as a tax on future output, discouraging productive investment plans of the private sector. This is because increases in production or exports of the indebted country generate revenues that must be used to repay current debt obligations; that is, creditors receive a significant portion of the future returns from investment.

Despite the appealing theoretical arguments put forward for the debt overhang hypothesis, there has been surprisingly little empirical work on the subject. This article, based on a recent study, attempts to test the existence of a debt overhang effect directly for one heavily indebted country—the Philippines—which is in the process of carrying out foreign debt reduction operations with its commercial bank creditors. The Philippines appears to be an appropriate country to study because of the relative stability of the investment and growth performance until the early 1980s, and the apparent severity of the debt problem.

The study uses a standard neoclassical approach to estimate investment demand —which is a function of general macroeconomic variables—and then adds some tentative indicators of debt overhang to the equation to determine the significance of the direct impact of the debt overhang on investment. The magnitude of the direct debt overhang effect is of critical importance in guiding policy measures to reactivate investment.

Period	Investment/ GDP	GDP growth rate
1951–55	12.6	8.2
1956–60	15.2	4.8
1961–65	16.0	5.2
1966–70	17.6	5.1
1971–75	17.6	6.1
1976–80	23.5	6.2
1981–85	20.2	–0.5
1986–89	14.0	4.5

Source: *National Income Accounts of the Philippines.*

While the results reported in the article apply only to the Philippines, the methodology is generally applicable to other indebted countries. The empirical findings reveal a significant disincentive effect of foreign debt on private investment, calling attention to the importance of debt reduction schemes that have been put forward in both academic and policy-making circles to help promote the economic recovery of debtor countries.

Growth and debt

The Philippine economy had shown steady growth and high investment rates in the postwar period, comparable to several of its successful Asian neighbors. Foreign debt accumulated rapidly, however, and by 1982-83, the country ran into economic difficulties and had to suspend its debt payments. Simultaneously, private and public investment collapsed, with the ratio of total investment to GDP falling by as much as ten percentage points.

The overall ratio of investment to GDP had increased steadily, up from under 15 percent in the 1950s to nearly 25 percent in the late 1970s, before collapsing to an average of 13.5 percent in 1985–87 (see Table 1 and charts). Not counting the surge in investment of the late 1970s—a result of dubious public investment projects—the level of investment in 1988 was still fairly low relative to the more normal levels of the 1960s and early 1970s. Although GDP growth rates have returned to historical levels since 1986, investment only appeared to recover in 1989, coincidentally with the improvement in the debt situation.

Early in 1990, the Philippines concluded a debt buyback operation with its commercial creditors, under the auspices of the Brady initiative, in which about $1.3 billion of its foreign debts were repurchased at a 50 percent discount of face value. This was the first stage of an envisioned two-stage operation

For a detailed analysis, see "Debt Overhang, Debt Reduction, and Investment: The Case of the Philippines" by Eduardo Borensztein, IMF Working Paper, WP/90/77, available from the author.

and it included both the cash buyback and loan commitments from commercial banks. A second round of debt reduction operations will take place at a later stage. The total resources made available by multilateral and bilateral agencies for cash buyback and "enhancements" of new debt securities were an estimated $1.5 billion, and the amount of medium- and long-term debt of commercial banks eligible for the debt reduction operations was about $7 billion. Total external debt, including debt to official and international sources as well as short-term debt, reached nearly $30 billion.

In the secondary market for Philippine debt, the reaction to the debt reduction plan was very positive. The price of the Philippine debt, which was about 36 cents per dollar in early March 1989 (before the announcement of the Brady initiative), climbed to 46 cents by mid-April, and to about 50 cents by mid-May, where it stabilized. What explains this positive development? First, the $1.5 billion provided by third parties (i.e., international financial institutions and bilateral sources) should increase, to some extent, total expected payments by the Philippines to its commercial creditors, as perceived by market participants. Second, the reduction in total contractual obligations of the Philippines resulting from the debt buyback would, by generating more favorable expectations, help increase investment and improve economic performance, thereby enhancing the debt-servicing capacity of the country. While it is possible that markets may associate the granting of debt reduction with a less firm commitment to service obligations in the future, the favorable effects of debt reduction seem to outweigh this consideration. It must be noted, however, that the mere observation of secondary market developments is not sufficient to establish causality between debt problems and economic performance.

Empirical estimates

To verify the disincentive to investment created by the debt overhang, private investment demand was econometrically estimated for the Philippines using postwar data. In this framework, investment is essentially determined by its expected profitability, expected real interest rates, and the cost of capital goods. Although the results prove to be both plausible and statistically significant, the various statistical tests carried out suggest that an important variable may have been absent. The effect of the debt overhang is most likely to be the missing variable.

The main difficulty lies in finding the proper way of accounting for the effect of foreign debt on private domestic investment. There are several indirect channels through which a large foreign debt curbs productive investment: high domestic real interest rates resulting from limited access to international credit, low profitability due to a downturn in economic activity, declines in public investment projects that involve private participation, and so on. Most of these effects are already captured by the variables included in the analysis, such as the domestic real interest rate and the expected marginal profitability of investment. However, the direct effect of the debt overhang on investment may not be reflected in the empirical analysis, because it is, in large measure, associated with expectations about future events.

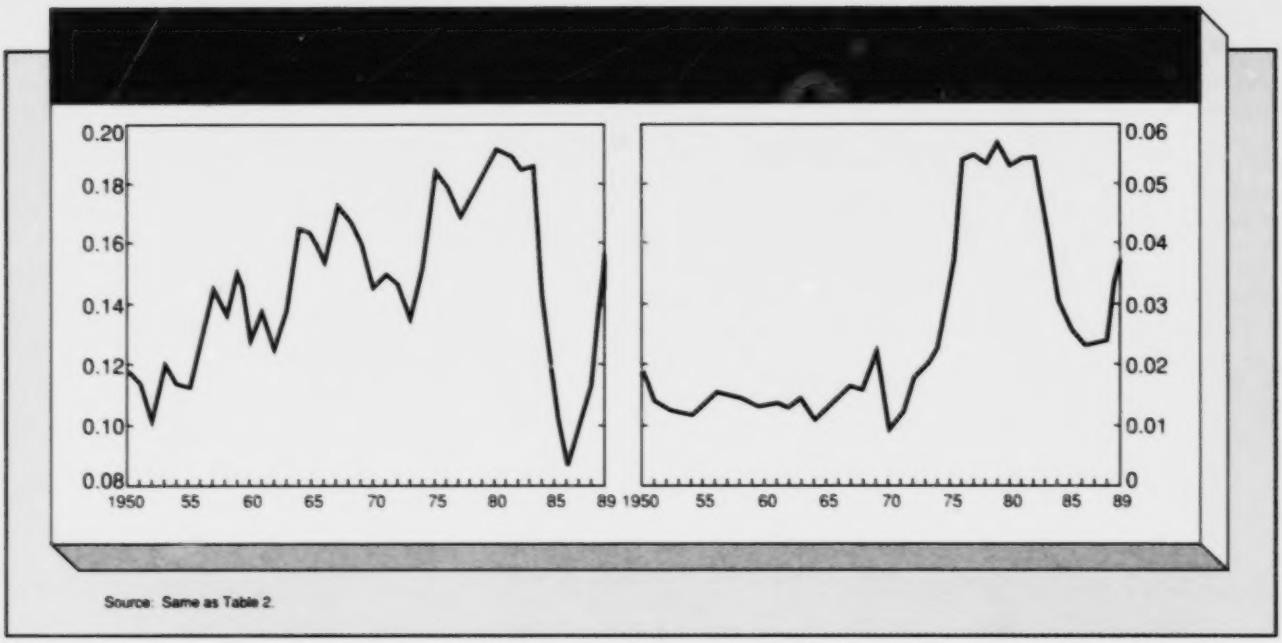
A simple approach can, however, be followed to incorporate the debt overhang effect in any analysis of foreign debt. From the point of view of a private investor, the debt overhang can be translated into the potential increase in (the present value of) taxation that will become necessary to repay foreign debt. Although such an increase in taxation is uncertain, due to the relative irreversibility of investment projects, many investors would prefer to wait until the debt situation clears. Therefore, the ratio of debt to GDP, being an approximate measure of the maximum magnitude of (the present value of) taxation that would be necessary to obtain the required resources to service debt, can be used as a measure of the reduction in net expected profits generated by the overhang effect.

But what is the appropriate concept of foreign debt in measuring the debt overhang? This depends on the interpretation of the debt problem. First, there is the problem of whether debt with official creditors (governments and international financial institutions) should be included in the relevant debt concept. Official debt is a substantial fraction of total debt in the Philippines, but its actual importance in creating a debt overhang problem is not obvious for several reasons. One can conceive situations in which refinancing of official debt payments would be much easier than private debt payments. For instance, if a debtor country was affected by negative external shocks (such as a deterioration in the terms of trade) but made satisfactory policy adjustments, it might still maintain access to refinancing of official debts; private flows, by contrast, would dry out if the creditworthiness of the country became questionable. In this sense, a dollar of official debt may represent less of a burden than a dollar of private debt. More important, if private investors anticipate that official credit would not be tightened as much as private credit in the event of unfavorable shocks, they would give less weight to official debt in their computation of the debt overhang.

Second, a more refined measure of foreign debt overhang—the amount by which debt exceeds the level that can be normally serviced—is perhaps appropriate. Arguably, not every dollar of foreign debt creates a disincentive to investment; at moderate levels of indebtedness, investors will believe that existing taxes and tax rates will suffice to service debt, but at higher levels, the government's need for extra revenue would threaten the return to private investments. Therefore, it is only when debt

Variable	Estimated coefficient	Effect of $1.3 billion debt reduction on the ratio of investment to GDP
Debt with private banks	−0.136 (0.056)	1.00
Private bank plus official debt[1]	−0.062 (0.032)	0.22
Private bank debt in excess of 1982 level	−0.313 (0.083)	2.31
Private bank plus official debt in excess of 1982 level[1]	−0.183 (0.043)	0.68
Private bank "debt overhang" (discount times face value)	−0.195 (0.119)	1.44
Private and official debt separately[2]	−0.146 (0.067)	1.08

Source: "Debt Overhang, Debt Reduction and Investment: The Case of the Philippines," by Eduardo Borensztein, IMF Working Paper WP/90/77.
[1]$0.65 billion of debt reduction.
[2]Coefficient corresponds to private debt.
Note: Figures in brackets are the standard error of the coefficient.



Source: Same as Table 2.

surpasses a certain level that the debt overhang effect is present.

Two approaches were taken in the analysis: 1) the debt overhang was measured as the excess of current debt over its level as of 1982, assuming that the level of indebtedness up to 1982 was a normal one and not problematic; and 2) the discount applied to transactions on the Philippine debt in the secondary market was used to measure the debt overhang (by multiplying the discount by the face value of private debt). For example, if Philippine debt were trading at 40 cents on the dollar, debt overhang would be measured as 60 percent of the contractual value of debt. A problem with the latter measure is that, because data on prices on secondary market transactions are available only since 1986, the price had to be assumed to be unity before that year, that is, there was no discount. The demand for investment was estimated using all these different debt variables.

Results

All results show a significant negative relationship between foreign debt and investment (see Table 2). The econometric tests reveal the first measure of debt overhang (the excess over the level of 1982) to be the most appropriate. The findings indicate that the median effect of a $1.3 billion debt reduction operation would be to increase investment demand by about one percentage point of GDP. The highest effect of debt reduction occurs when the second measure of debt overhang (based on the secondary market discount) is used, with an expected increase in investment of 2.3 percent of GDP. The impact on investment is smallest when the relevant concept of debt included both official and private creditors, with an estimated increase in investment of only 0.22 percent of GDP.

In addition, when the significance of the effects on investment of debt from private and from official sources is statistically tested, the results support only the existence of an effect from private bank debt. There is no evidence that debt with official creditors (both international and bilateral) has any adverse effects on private investment. As noted above, the fact that financing from official sources might be available even under adverse circumstances helps explain this result.

The increase in the investment-to-GDP ratio reported in Table 2 represents an increase in investment demand only. For an increase in investment to take place, a concomitant increase in domestic (and/or foreign) savings is required. Thus, the expansion in investment would actually be somewhat lower than the values reported, but the higher level of investment should persist over time, because the debt reduction removes the disincentive to investment in a permanent way.

Conclusion

The relative scarcity of empirical work on the relationship between foreign debt and investment is symptomatic of the difficulties implicit in attempting such an evaluation. Two key elements cannot be observed: the perceptions about the determination of future repayments from a heavily indebted and nonperforming debtor country, and the sources from which the debtor country government can finance such payments. But both economic reasons and casual evidence on investment and growth make the case for the debt overhang effect, *a priori*, a strong one.

In the case of the Philippines at least, econometric results have shown foreign debt to be among the factors depressing private investment after 1982. The estimation of the debt overhang effect identifies a direct effect, over and above the effect that foreign debt may have on domestic interest rates or current profitability, although the exact mechanism through which this debt overhang effect operates is not identified. In conclusion, debt reduction in the Philippines will have a beneficial effect on investment and growth. Of course, this stimulus might be overwhelmed by other factors affecting the Philippine economy currently, such as political turmoil, natural disasters, and the rise in energy prices. ■

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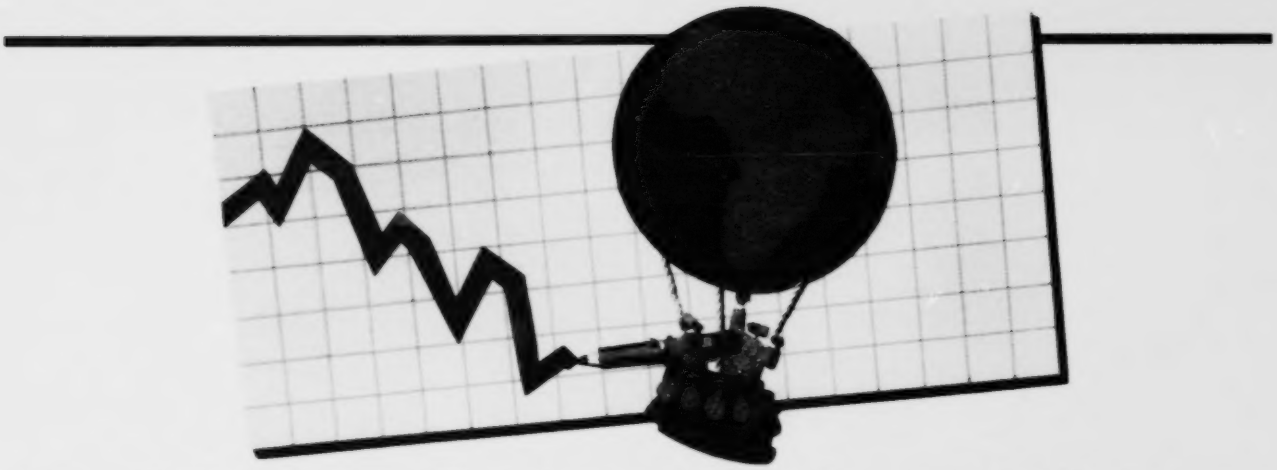


Tackling Inflation During Reforms in Africa

Is there a connection between devaluation and high inflation? Not a clear one. Depends on accompanying monetary and fiscal policies and the presence of parallel markets

Ajay Chhibber

The rapid increase in the rate of inflation in a large number of economies in Sub-Saharan Africa (SSA) has been a cause of much concern, not least because of its damaging social and economic consequences, and few African countries have the institutions to manage inflation, either through indexation or through safety net programs. Moreover, with persistently high inflation there is the danger that inflation may become self-generating by strengthening changing expectations about future inflation. While few African countries have experienced the triple-digit inflation often observed in Latin America, the average inflation rate has increased markedly, sometimes fivefold in many countries.

From 1975–89, average inflation in SSA was about 16.7 percent per annum, much above the average rate of 6.4 percent per annum in industrial countries (see chart and table). But this average masks considerable disparities. In particular, since 1977 inflation has been much lower in countries belonging to the CFA Franc Zone, where it has closely followed French inflation, whereas triple digit inflation has been recorded in at least four countries—Ghana, Sierra Leone, Uganda, and Zaire.

A more detailed discussion is available in "Africa's Rising Inflation: Causes, Consequences, and Cures," by the author, PRE Working Paper, No. 577, The World Bank, Washington, DC

It has been argued by some that devaluation, combined with price and interest rate liberalization—an integral part of many World Bank and IMF-supported structural adjustment programs—has led to "cost-push" inflation, that is, inflation that is created and sustained by increases in the cost of production, these increases being independent of the state of demand. Without a sufficient supply response (i.e., the extent to which output increases in the export or import substituting sectors), these price changes have had little positive real effects, while generating higher inflation. This view is supported by the relatively low inflation rates in the CFA Franc Zone countries, which have a fixed exchange rate system and whose monetary policy has to follow certain rules. But the relationship between exchange rate policy and inflation is more complex, and depends on the presence of parallel markets and whether appropriate monetary and fiscal policies are pursued as part of the reform effort.

This article presents the major lessons for an anti-inflationary policy, and is based on a World Bank research project covering Algeria, Côte d'Ivoire, Ghana, and Zimbabwe. Each of these countries was selected as a prototype of the different macropolicy regimes described in the box. In particular, this article discusses the impact on inflation of a realignment of exchange rates, monetary and fiscal policies, and price liberalization.

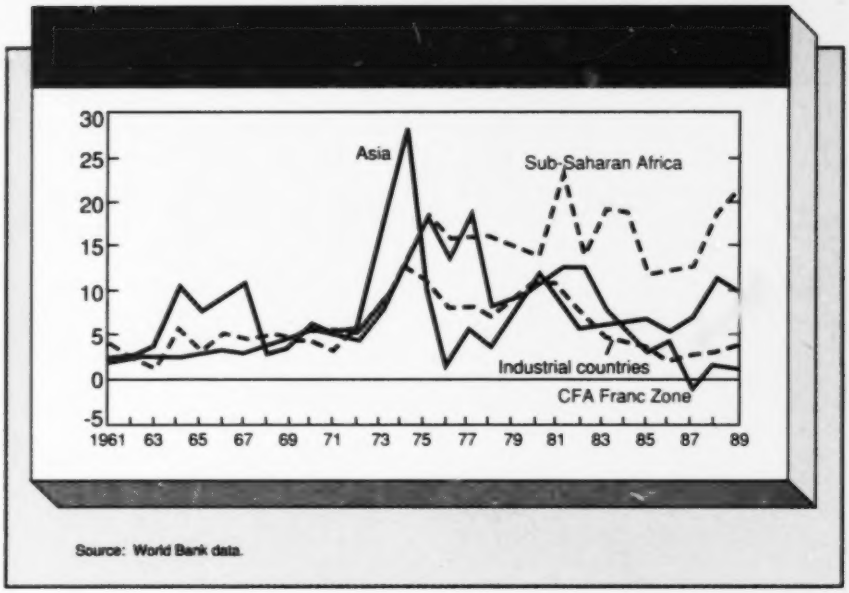
Exchange rate policy

There are two approaches to effecting a change in the real exchange rate—through a nominal exchange rate devaluation or through a deflation of the economy. Some economists have argued that the latter approach is preferable because it avoids the costs of high inflation. A somewhat different, but related, critique has come from the Economic Commission for Africa (ECA), which argues that a nominal devaluation is very quickly wiped out by inflation, with no effect on the real exchange rate. This arises from the low supply response and the high share of monetary financing of the budget in many African countries. But what does the evidence tell us?

First, there is no doubt that there is a direct cost-push effect from exchange rates to domestic prices. This is confirmed by the work on Ghana and Zimbabwe as part of this project, as well as by numerous studies in Africa and other parts of the world. In general, the immediate effect of exchange rate changes on inflation is likely to be high, even if imports represent a small proportion of GDP. This is due to the importance of key imports in the production process and the inability of domestic industry to substitute for these imports. In Ghana, where the share of imports in GDP is about 0.20 percent on average during the estimation period, we find that a 1 percent

increase in the exchange rate leads to a 0.40 percent increase in prices.

Second, the initial effect of exchange rate changes on domestic prices is small when there is a substantial domestic capacity to produce goods that can substitute for imports. The effect is reduced even further when price controls and subsidies are introduced. This has been demonstrated in Zimbabwe, where both factors lead to a very small initial effect of exchange rate changes on domestic inflation. In the extreme situation, where there are complete price controls, as in Algeria, exchange rate changes have no effect on domestic prices, indicating that domestic inflation is primarily a function of changes in price controls. However, real or "virtual" inflation in the system is much higher. Moreover, the use of subsidies to avoid the full impact of exchange rate changes on domestic prices often leads to fiscal deficits whose financing has overall inflationary implications.



Source: World Bank data.

Third, the effects of devaluation on domestic inflation depend to a large extent on accompanying fiscal and monetary policies. A simulation exercise on Zimbabwe, under alternative assumptions about export response and the share of monetary financing of the budget, shows that under normal circumstances, about a third of the nominal devaluation would get offset by an increase in domestic prices. The full effect of a devaluation on domestic prices is larger than the initial effect, because the budget deficit in Zimbabwe increases with a devaluation. A higher budget deficit that is financed mainly by money creation leads to higher inflation. In Zimbabwe, the net effect of a 10 percent increase in the rate of devaluation is an increase in inflation by 3.33 percent. When the supply response of exports is low in the short run (elasticity 0.1), and a high proportion of the budget is financed by monetary creation, devaluation is completely offset by a rise in domestic prices, and there is no effect on the real exchange rate. Because the domestic bond market is not adequately developed for the government to borrow in the domestic market, monetary financing of the budget deficit is quite common in Africa. These results appear to lend some credence to the ECA critique. But their resolution lies in managing the fiscal deficit and pursuing an appropriate monetary policy, not in avoiding exchange rate adjustments.

Moreover, exchange rate changes can also often improve the fiscal deficit and will thereby lead to lower inflation. In Ghana, for example, devaluation led to an improvement in the fiscal deficit, and as a result, a declining rate of inflation. Simulations with a macroeconomic model for Ghana show that a slower devaluation would have meant a higher rate of inflation, as well as a more depreciated parallel exchange rate. The fiscal deficit improved, because devaluation resulted in

	1980–89	1975–89	Highest recorded
Industrial Countries	**5.0**	**6.4**	
Asia	**7.9**	**7.3**	
Sub-Saharan Africa	**17.2**	**16.7**	
More than 20 percent			
Ghana	43.7	52.2	122.9
Sierra Leone	63.7	43.9	178.7
Somalia[1]	41.1	32.9	91.2
Sudan[1]	33.1	25.1	64.7
Tanzania[1]	30.5	24.1	35.3
Uganda	104.6	—	238.1
Zaire[2]	58.8	62.1	101.0
Zambia[1]	30.8	24.5	55.6
Between 10–20 percent			
Botswana	10.5	11.0	16.4
Burundi	7.6	10.1	36.6
Gambia	17.9	15.1	56.7
Kenya	10.4	11.3	20.4
Lesotho	13.6	13.9	18.0
Madagascar[1]	17.2	14.3	31.8
Malawi	16.6	—	33.9
Mauritius	7.6	10.8	42.0
Nigeria	20.5	18.9	40.9
Swaziland[1]	13.9	13.7	20.8
Zimbabwe	13.5	12.3	23.1
Less than 10 percent			
Burkino Faso	4.1	6.4	30.0
Cameroon[1]	9.4	9.8	17.2
Central African Republic[2]	3.9	—	14.6
Congo[1]	8.0	8.5	17.4
Côte d'Ivoire[1]	5.3	9.5	27.4
Djibouti	4.2	—	18.1
Ethiopia	4.3	8.3	28.5
Gabon[1]	7.7	9.8	28.4
Liberia[1]	4.3	6.1	19.5
Niger	2.4	6.7	23.5
Rwanda	4.4	6.8	31.1
Senegal	6.5	6.6	31.7
Togo	4.0	6.3	22.5

Source: World Bank data.
[1]For these countries, averages are for 1980–88 and 1975–88.
[2]For these countries, averages are for 1981–89.

higher receipts in domestic currency of foreign aid and a reduction in exchange subsidies to importers.

Finally, the size of parallel markets determines the degree by which official devaluation will affect prices. Once the misalignment of the exchange rate has gone very far, consumer and producer prices already reflect the parallel market exchange rate—the official devaluation is just the formalization of the status quo. The Ghana study showed through appropriate econometric work that devaluation of the official exchange rate had no direct cost-push effect. This is true also of a large number of countries in the Type III category in Africa, where severe misalignments of the exchange rate have led to the emergence of a large parallel market for foreign exchange. Hence, reforms without devaluation are unlikely to be successful. In these cases, managed official devaluation leads to lower inflation if the budget improves along with devaluation.

These studies make one point clear: there is no unique relationship between devaluation and inflation. Initially, there is always a positive cost-push effect of a devaluation on inflation, as is confirmed by almost all studies of inflation in Africa. The exceptions are countries with complete price controls. But it is clear that these controls are usually unsustainable and their removal typically involves wrenching economic—and often political—change, because of a release of repressed inflation. The subsequent and overall effect of devaluation on inflation, however, depends on the impact of the devaluation on the budget, the adequacy of external funding of the program, the export response, and the accompanying monetary policy.

Monetary and fiscal policies

In Africa, as in other parts of the world, there is a strong link between the growth of the money supply and inflation. Empirical results in Ghana and Zimbabwe show that excess real money balances have a significant and positive effect on inflation. This link is confirmed by a number of other studies on inflation in Africa. In these cases, a reduction in the fiscal deficit, and thereby, in the growth of the money supply, is obviously necessary to reduce inflation. But, as is shown in the case studies, how and where fiscal cuts are made matters a great deal in reducing inflation. Expenditure cuts that affect productive investments will lead to a much smaller impact on inflation and, in the extreme, may even raise it.

The strong link between monetary growth and inflation raises the issue of what causes low inflation in the CFA Franc Zone countries. A recent study of inflation in the CFA Franc Zone showed that in three of the four countries examined, there was no link between domestic credit growth and monetary growth. According to this study and the case study on Côte d'Ivoire for this project, excessive domestic credit growth adversely affects the balance of payments instead of resulting in high inflation.

The benefit of membership in the monetary union is obviously lower inflation. This has very little to do, however, with the fixed nominal exchange rate. It arises primarily from the common monetary policy and no capital controls. But their experience in the 1980s demonstrate that there are some costs as well. The consequences of a fixed exchange rate have been high variability in the real exchange rate in these countries and lower growth.

Type I

Fixed exchange rates; no capital controls; none or very few price controls

Benin	Equatorial Guinea
Burkina Faso	Gabon
Cameroon	Lesotho
Central African Republic	Mali
Chad	Niger
Comoros	Senegal
Congo	Swaziland
Côte d'Ivoire	Togo

Type II

Fixed-but-adjusting exchange rates; capital controls; selective price controls

Burundi	Rwanda
Cape Verde	Seychelles
Kenya	Zimbabwe
Mauritius	

Type III

Dual or multiple exchange rates; capital controls; selective price controls

Gambia	Sao Tome & Principe
Ghana	Somalia
Guinea	Sudan
Guinea-Bissau	Tanzania
Madagascar	Uganda
Malawi	Zaïre
Nigeria	Zambia

Type IV

Dual or multiple exchange rates; capital controls; widespread price controls

Algeria[1]	Ethiopia[2]
Angola[2]	Mozambique[2]

Source: "Africa's Rising Inflation: Causes, Consequences, and Cures," by Ajay Chhibber.
[1]Although Algeria is not in Sub-Saharan Africa, it is included here for discussion.
[2]Countries such as Angola, Ethiopia, and Mozambique have extensive price controls but are unable to enforce them.

Liberalizing prices

In examining the relationship between price decontrols and inflation, one has to look at three cases: economies with extensive price controls; economies with selective-but-enforced price controls; and economies with parallel markets.

In the first case, the issue in managing the price decontrol is one of measuring the extent of monetary "overhang" (i.e., excess liquidity) and determining how much can be absorbed by special schemes and how much will be dissipated through inflation. These special schemes could involve the sale of public assets, such as housing. Alternatively, the government could sell bonds that provide a positive real return to absorb money balances that would otherwise drive up the price of scarce commodities. The remaining money supply will probably lead to higher demand for goods and services, driving up inflation. The degree of supply response will also determine the extent of inflation. In Ghana, for example, higher real growth has led to an increase in the real money balances, lowering the inflationary impact from the same level of monetization.

The enforcement of selective controls implies that demand for commodities subject to price controls cannot be met. Typically, price controls are effective when they are applied through public enterprise pricing, but can be easily circumvented by the private sector. In Zimbabwe, low-income consumers are protected by subsidized transport, electricity, and publicly provided housing. Part of the unmet demand spills over into the market for uncontrolled commodities, whose prices rise, and the unspent balance accumulates as in the first case in the form of monetary assets. In this situation, price decontrol typically leads to higher prices in the sectors that were earlier subject to price controls; such price rises may increase costs in other sectors and thus their prices.

Finally, the existence of parallel markets eliminates any excess demand, as demand for controlled commodities spills over into parallel markets, leading to higher prices there. Inflation is unrecorded and price decontrol typically has insignificant inflationary effects.

Conclusion

At first glance, the evidence appears to suggest a strong correlation between ex-

change rate regimes and inflation. Countries with floating exchange rates (or auction systems for access to scarce foreign exchange) appear to have experienced higher inflation. On the other hand, countries with fixed exchange rates have typically faced lower inflation.

A careful analysis, however, indicates that the story is more complex. In countries such as Ghana, Sierra Leone, Uganda, and Zambia, the high inflation was prevalent prior to the exchange reforms of the 1980s and was prevalent through periods when the exchange rate was fixed. The high inflation rendered the official exchange rate more or less irrelevant and parallel markets emerged. The level of the official exchange rate was important for accounting purposes, but had very little relationship to the true price of foreign exchange—the parallel exchange rate. Detailed analysis of the Ghanaian exchange reforms shows that adjusting the official exchange rate may have actually lowered inflation by reducing fiscal deficits. The underlying cause of inflation was the high fiscal deficits, which were financed primarily through money creation.

The lower and stable inflation in countries with pegged exchange rates, such as those of the CFA Franc Zone, also has its genesis in the underlying monetary and financial arrangements, rather than in the fixed exchange rate. The openness of the capital account between countries of the Zone ensures that the money supply is not a policy variable. Domestic credit expansion does not lead to monetary expansion and inflation, but instead affects the balance of payments.

The key, then, to price stability lies in providing checks on large fiscal deficits and noninflationary mechanisms for financing them, rather than the exchange rate regime per se. In principle, this can be done through responsible expenditure and revenue policies. In practice, experience shows that it requires institutional arrangements that restrain excessive expenditure. Unrestricted movement of capital provides one mechanism for such a restraint. The other is to effectively separate monetary and fiscal policy, either by joining a monetary union such as the CFA Franc Zone, or by establishing and managing an independent central bank. This independence also needs an institutional structure akin to the Federal Reserve system in the United States. The central bank needs to be given its autonomy.

The costs of joining a monetary union appear to be high: pegging the nominal exchange rate restricts adjustment in the real rate and throws all adjustment effects onto fiscal policies. But it may ensure price stability. The best policy option is to have appropriate monetary and fiscal policies without the rigidity of a fixed pegged exchange rate. This may pave the way for price stability without jeopardizing growth. ■

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Will Contemporaneous Devaluations Hurt Exports from Sub-Saharan Africa?

Contrary to the expectations of some critics, recent research suggests that exports in Sub-Saharan Africa may well rise following devaluations by a number of countries

Dean DeRosa and Joshua Greene

During the past decade, critics of the IMF- and World Bank-supported adjustment programs in Africa have argued that the frequent recommendation for currency devaluations is likely to prove counterproductive. According to these critics, any gains in competitiveness for individual countries would be offset by a fall in the terms of trade resulting from devaluations and increases in export volume from other countries exporting the same products. The net result would be no gain—and perhaps even a decline—in total export earnings for the countries that devalue. Given that African countries are principally exporters of primary commodities, there is concern that the devaluations undertaken by these countries will lead to a cumulative negative impact on their export prices and economic welfare.

The true picture is somewhat different and, given the diverse nature of individual economies, much less clear than the view held by the critics. Devaluations by countries that export mainly primary commodities can lower the earnings from each unit of commodity exported by increasing the world volume of exports of the commodity. Indeed, these declines in per unit earnings may be large enough to offset the effects of higher export volumes, thereby lowering overall export earnings. The possibility of this, however, depends on whether the increases in export volumes in the devaluing countries significantly affect the world supply of these commodities. If world demand for most primary commodities is sufficiently insensitive to price changes, even a moderate increase in the world supply could lower prices sufficiently to cause export revenues of the producing countries to fall. For this to happen, however, the devaluing countries must be responsible for a major share of total world supply of commodities they export, and these commodities must account for a large share of these countries' total exports. Thus, the two key parameters for judging the effect of contemporaneous devaluations by Sub-Saharan African countries are (1) the combined share of these countries' exports of major primary commodities in world supply, and (2) the share of these commodities in the devaluing countries' total exports. Also important are the nature of world demand for the relevant commodities and the impact of devaluation on domestic prices and production. These factors, however, are not crucial to our analysis.

Recent devaluations

Before examining the effect of devaluation on exports in Sub-Saharan Africa, it is important to acknowledge that many of these countries have undertaken currency devaluations during the past decade. As shown in Table 1, in terms of bilateral (US dollar) exchange rates, 11 or more countries in Sub-Saharan Africa experienced devaluations of 10 percent

or more each year from 1981 through 1989. Moreover, in terms of nominal effective exchange rates, ten Sub-Saharan African countries experienced devaluations of 10 percent or more each year from 1984 through 1989. Many of these adjustments were taken in the context of IMF- and Bank-supported adjustment programs and reflected deliberate policy actions to lower the level of the underlying real exchange rate, which determines the international competitiveness and profitability to producers of a country's exports. At the same time, however, there is little evidence that these depreciations were made as competitive responses to earlier devaluations by other African countries. Rather, most of the depreciations were taken to offset the overvalued exchange rates that had resulted from declines in the international terms of trade faced by most African countries, and, in many cases, from high inflation rates attributable to domestic economic policies. In some cases, currencies were also devalued to alter the domestic terms of trade between export producers and others in the economy, in particular, to increase the profitability of exports and to allow higher real producer prices for farmers supplying export crops to agricultural marketing agencies.

	1981	1982	1983	1984	1985	1986	1987	1988	1989
Bilateral rate vis-à-vis US dollar[1]	17	15	15	20	20	11	15	16	22
Nominal effective exchange rate	3	3	7	10	10	18	16	11	11
Of which: Real effective exchange rate	1	2	3	5	4	10	8	3	5

Source: IMF, *International Financial Statistics*; and IMF, Information Notice System.
[1]Exchange rates measured in units of national currency per US dollar. Excludes countries with fixed parities to the French franc.

Effects on export earnings

Data on primary commodity exports by country of origin indicate that only for very few commodities do Sub-Saharan African countries account for a major share of total world exports. In recent years, Sub-Saharan African countries accounted for 50 percent or more of world exports only in the case of two commodities—cocoa beans and palm kernels (see Table 2). For most other exports, Sub-Saharan Africa accounted for less than 25 percent of total world exports, and the region's share of total exports for virtually all nonmineral commodities has fallen significantly since 1980.

A recent study (see source to Table 3) published by the International Food Policy Research Institute (IFPRI) provides a guide to the likely effects of simultaneous devaluations by Sub-Saharan African countries. The analytical model used in the IFPRI study incorporates values for the relevant shares of producing and consuming countries in world commodity markets and estimates of the responsiveness of price to demand and supply for imports and exports of primary commodities by countries in Sub-Saharan Africa, as well as other regions. The study presents the results of simulations that gauge the combined effects of a 5 percent policy-induced increase in the supply of each of the six primary commodities that comprise the major exports of Sub-Saharan African countries. We, in turn, have applied the results of this exercise to the corresponding case of contemporaneous devaluations of real exchange rates by Sub-Saharan African countries that would increase the profitability and, therefore, the supply of their traditional exports.

Table 3 summarizes the results of the simulations. As indicated, marginal revenues from the collective increases in output and exports following devaluation decline only for cocoa, and then only in the short run. In the long run, even this negative effect tends to disappear, as other producing countries reduce the volume of their exports of cocoa in response to lower world prices. For coffee, where Sub-Saharan African producers accounted for less than 20 percent of world supply by 1987, the decline in world prices was estimated to offset, in the short run, only about half, and in the long run only 25 percent, of the gain in export earnings induced by the supply response of African export producers. For cotton, sugar, and groundnuts (i.e., peanuts), the initial gains in export earnings were estimated to be offset by less than 5 percent in the short run and 2 percent in the long run. Overall, therefore, these simulations suggest that contemporaneous devaluations have raised total export earnings from individual crops in Sub-Saharan Africa.

The positive impact of contemporaneous devaluations on export earnings is strengthened if, as has typically happened in IMF- and World Bank-supported adjustment programs, the devaluations took place in concert with economic reforms aimed at eliminating distortions that reduce economic efficiency. In particular, if these reforms generated efficiency gains sufficient to offset the effects of a decline in world prices, the effective prices paid to producers could still increase and net export earnings from cocoa could rise. At the same time, because other commodities represent a significant percentage of total export earnings, even in the region's two leading cocoa producers, Ghana and the Côte d'Ivoire, net receipts from other commodities would increase. Thus, there is a high probability that contemporaneous devaluations by Sub-Saharan African countries would yield a net gain in export earnings even in these two countries.

Finally, it is important to recognize the potential benefits of devaluations for nontraditional exports, such as high-value horticultural products and light manufactures, for which many African countries may have an underlying comparative advantage.

Product	1980 Export value	1980 Percent of world exports	1987 Export value	1987 Percent of world exports
Cocoa beans	1,796.4	63.4	1,783.8	59.7
Palm kernels	38.0	70.9	11.3	84.3
Sisal	61.3	46.8	14.7	33.3
Coffee	2,794.4	22.4	1,929.5	18.8
Groundnut oil	89.0	23.9	67.2	33.9
Tea	281.6	14.0	301.4	14.0
Cotton	747.2	9.5	680.4	10.2
Tobacco	339.0	8.9	498.6	12.6
Groundnuts	69.1	13.1	34.5	6.0

Source: United Nations Conference on Trade and Development Commodity Yearbook, 1987, 1989.

Allowing exchange rates to adjust to more realistic levels could lead to significant increases in the production and export of such items. This is particularly true if these adjustments occur in the context of adjustment programs that are designed to rectify shortcomings in the infrastructure of Sub-Saharan Africa, such as poor communications networks, outmoded investment codes, and weak regulatory and institutional arrangements.

Indeed, the greatest effects from adjusting exchange rates may come from providing incentives to produce items not yet grown or manufactured to any significant extent in Sub-Saharan Africa. In this regard, the experience of Mauritius may be instructive. During the 1970s, Mauritius implemented an ambitious adjustment program of exchange rate adjustments and widespread reforms of its domestic tax system, investment code, and exchange and payments system, which featured the establishment of an export processing zone (special enclaves outside a nation's normal customs barriers) within which exporters could profitably undertake a variety of manufacturing activities. In recent years, the output of firms in Mauritius' export processing zone has displaced sugar as the country's leading export. Although factors unique to Mauritius, such as the country's highly literate population, may have contributed to this outcome, other countries in Sub-Saharan Africa could also benefit from undertaking similar reforms, including currency depreciations aimed at increasing the competitiveness of their economies.

. . . simulations suggest that contemporaneous devaluations have raised total export earnings from individual crops in Sub-Saharan Africa.

Conclusion

Although it is conceivable that under certain conditions contemporaneous devaluations could generate a sufficient deterioration in the terms of trade to reduce total export earnings, such conditions in practice have not occurred in Sub-Saharan African countries. Although these countries are primarily exporters of primary commodities, their shares in world exports of these commodities are generally low. Thus, even simultaneous devaluations by a number of African countries are unlikely to reduce world commodity prices sufficiently to reduce their total export earnings. The one possible exception is the case of cocoa producers, which could face a temporary decline in export earnings in the short run. Even for these countries, however, there are additional factors—such as the significant share of export earnings from other commodities for which the market share of countries in Sub-Saharan Africa is lower, and the possibility of export contraction by non-African producers over time—which would raise total export earnings over the longer run. There is also a strong possibility that devaluations, as part of comprehensive structural adjustment programs aimed at promoting efficiency and fostering productive investment, could lead to significantly higher volumes of nontraditional exports, as well as greater production of traditional exports. Therefore, in practice, contemporaneous devaluations by a number of countries in Sub-Saharan Africa can be expected to be advantageous both for individual countries and for the group as a whole. ■

	Cocoa	Coffee	Tea	Cotton	Sugar	Groundnuts
			Short run[2]			
Change in production	2.8	4.0	4.5	4.8	4.8	4.4
Change in exports	3.0	5.1	6.1	10.8	55.1	34.6
Change in world market price	–5.6	–2.5	–1.1	–0.4	–0.5	–1.6
Marginal revenues as a percent of world price	–86.7	51.0	81.9	96.3	99.1	95.4
			Long run[3]			
Change in production	2.5	4.3	4.6	4.9	4.9	4.0
Change in exports	2.9	5.5	6.3	9.5	56.3	33.4
Change in world market price	–2.5	–1.4	–0.7	–0.2	–0.25	–1.0
Marginal revenues as a percent of world price	13.8	74.5	88.9	97.9	99.6	97.0

Source: "External Demand Constraints for Agricultural Exports: An Impediment to Structural Adjustment Policies in Sub-Saharan African Countries?" by Ulrich Koester, Hartwig Schaefer, and Alberto Valdes, *Food Policy*, Vol. 14, August 1989.

[1]Estimates are based on simulations of a simple model of production, consumption, and world trade of primary commodities in which each Sub-Saharan African country is assumed to shift outward, through policy actions or other autonomous means, the supply schedule of each commodity by 5 percent. The reported changes in production are equilibrium values that reflect decreases in world prices following the initial increases in supply. For the Sub-Saharan African countries, price elasticities of export supply are assumed equal to about 1, except for sugar (elasticity of about 3) and groundnuts (elasticity of about 6). For other countries in the aggregate, price elasticities of import demand are assumed to range from about 0.5 for cocoa and coffee to values much higher than unity for groundnuts and cotton.
[2]Assumes no production response by non-African exporting countries.
[3]After production decreases in non-African exporting countries.

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Malaysia's Successful Reform Experience

A determined effort in the difficult 1980s turned a faltering economy into a model of structural adjustment for other developing countries

Janos Somogyi

The economic story was not an unfamiliar one: a growing developing economy runs into trouble during the first half of the turbulent 1980s. The result: economic imbalances, structural weaknesses, and poor prospects for growth. But, where many other developing countries—drafting demanding blueprints of reform but postponing difficult adjustments of their economies—continued to flounder, Malaysia succeeded, and its experience over 1986–90 offers a model for countries embarking on the implementation of reform. A far-reaching program of liberalization and structural reforms, backed by cautious macroeconomic policies to ensure strict observance of resource constraints, controlled the economic slide and revived growth.

In the strategy pursued by the Malaysian authorities, the emphasis was on private sector activity as the main engine for growth. This was considered the best approach for developing new ventures, creating employment, and infusing new technologies and skills into the economy. The public sector, while continuing to consolidate its fiscal policies and operations, was geared to providing a supportive environment for healthy economic expansion. As a result of these efforts under the Fifth Malaysia Plan of 1986–90, by the latter part of the decade, Malaysia had achieved a spectacular turnaround: real GDP growth recovered, while the external imbalance was redressed, and inflation was controlled (see charts).

The economic background

Malaysia had a remarkable economic record during the 1960s and 1970s. Initially, the authorities aimed to foster growth through investment in rural development and infrastructure. Following the outbreak of racial conflict in 1969, however, they formulated a broad development plan for 1971–90 —the New Economic Policy—to strengthen national integration by emphasizing growth, while attempting to eradicate poverty and to reduce ethnic and regional disparities. The development strategy was managed by a prudent government with a liberal trade policy, a competitive exchange rate, and a judicious mix of fiscal discipline and conservative monetary policies. As a result, the economy grew at an annual average rate of about 8 percent during the 1970s, exceeding the performance of all but the four newly industrializing Asian economies, with inflation averaging about 5 percent and the external position remaining comfortable—that is close to equilibrium and with adequate resources.

Economic performance became unstable, however, during the early 1980s. The prospect of substantial oil revenues and the desire to counter the effect of the world recession encouraged the authorities to embark on an ambitious development program, launching a state-owned heavy industries sector, and raising total capital formation to 40 percent of GNP by 1983 (see charts). The ensuing

expenditures created severe fiscal and external imbalances that were financed mainly by heavy foreign borrowing. These disequilibria were reduced sharply in 1983–84, as both foreign exchange earnings and budget revenues were boosted by strong external demand and improved terms of trade, and government spending was cut drastically.

But in the wake of an erosion of foreign demand and the fall in the prices of petroleum and other export commodities, the economy took an abrupt downturn in 1985–86: output growth faltered, investment dropped sharply, and unemployment soared. This interfered with the process of fiscal consolidation and led to further heavy foreign borrowing to finance the budget deficit. By the end of 1986, Malaysia's external debt rose to $22 billion, or 84 percent of GNP, well above the average of 48 percent of GNP recorded by developing countries with recent debt servicing difficulties.

The resulting recession exposed structural weaknesses in the economy that had been disguised earlier by the buoyancy of demand. Notably, capital efficiency had deteriorated, largely because of a shift in the structure of investment. While public investment had been cut back in infrastructural projects, it expanded in manufacturing, as nonfinancial public enterprises (NPEs) diversified into activities in which government ownership had little comparative advantage. By 1986, the public enterprise sector had accounted for about one quarter of gross value added, one of the highest shares among nonsocialist countries. This added to Malaysia's fiscal and external debt burdens and displaced private investment. Private investment activity was further hampered by a loss of competitiveness due to wage increases in excess of productivity gains, a marked effective appreciation of the exchange rate during the early 1980s, and by restrictions on new undertakings through licensing requirements and constraints on equity ownership. Business confidence was further eroded as the property market collapsed and, partly owing to a heavy concentration on lending to the property sector, a number of banks and finance companies were threatened by insolvency.

Reforms usher in recovery

When economic growth faltered, the authorities launched major reforms through the Fifth Malaysia Plan (covering the period 1986–90). The structural reforms were effected through various means.

Revitalization of the private sector. The authorities sought to create a more attractive climate for local and foreign investors. They relaxed industrial licensing, guidelines on the acquisition of assets, and ownership rules for foreign direct investment. Fiscal reforms shifted the emphasis from direct and commodity-based taxation toward more broadly based consumption taxes. With the abolition of the excess profit tax and a reduction of the corporate income tax rate during 1988–89, the taxation of profits was moved close to the dominant rates prevailing among East Asian economies. While Malaysia's average level of tariff protection has been low relative to other developing countries, the rates varied widely. In order to improve resource allocation, the authorities reduced import duties on manufactures that had enjoyed extensive tariff protection over the previous ten years. Most revenue losses were offset by closing tax loopholes, improving revenue collection, widening the coverage of the sales tax, and streamlining tax incentives. Although some fiscal incentives were tightened or discontinued, the pioneer status incentives, encompassing tax exemptions on profits and dividends for up to ten years for high risk ventures fostering new technologies continued to remain attractive.

The authorities sought to create a more attractive climate for local and foreign investors.

Active external policies. The authorities' exchange rate policy also contributed to boosting confidence in the business sector. The exchange rate was depreciated markedly against its currency basket, which, together with relatively restrained cost and price increases in Malaysia, restored external competitiveness. The real effective rate of the ringgit fell by 35 percent between the latter part of 1984 and the beginning of 1989, which more than reversed the real appreciation of the early 1980s. The economy's growth prospects also benefited from liberal foreign trade and investment policies. Malaysia's open trading system, with an average nominal tariff of about 13 percent, compares favorably with most countries in the region and restrictions affecting less than 5 percent of imports are regularly reviewed to identify possibilities to reduce the level of protection. Whereas Malaysia has maintained a competitive set of incentives to encourage foreign direct investment, a recent survey indicated that the current boom in the inflow of direct investment capital has been dominantly influenced by low labor costs, the sophistication of the labor force, and a relatively well-developed infrastructure.

Supported by the favorable development of the external current account balance and the inflow of equity capital in recent years, Malaysia's external debt policy has concentrated on reducing foreign debt and the related exposure to exchange and interest rate risks. The strategy has included both reduced external borrowing and initiatives by the public and private sectors to prepay and refinance more expensive loans as well as to arrange interest and currency swaps.

Supportive role of public sector. The budget strategy to foster economic recovery was rooted in strict fiscal discipline regarding public expenditures, so that resources could be released to the private sector, and in the provision of adequate public services and infrastructure for private sector activity. The prudent management of operating expenditures included a freeze on public employment and a deferral of civil service salary adjustments in the initial period. Despite a drop of about 5 percent of GNP in government revenues attributable to the erosion of commodity prices during 1985–86, restraint on current spending brought about a shift of the current federal budget balance from a deficit of 0.5 percent of GNP in 1986 to a surplus estimated at about 1.5 percent of GNP in 1990. A decline of the overall deficit from 11.4 percent of GNP in 1986 to an estimated 5 percent of GNP in 1990 was also helped by a containment of development expenditures through 1988, as projects were scaled down and their implementation postponed. Significant increases were planned, however, in public investment during the subsequent two years. The emphasis was placed on avoiding bottlenecks in infrastructure, fostering education, and alleviating poverty, with the projects essentially complementing private sector investment.

Rehabilitation of public enterprises. The consolidation of public sector accounts was supported by efforts to scale down the dependence of NPEs on the budget. The financial difficulties of these enterprises had been exacerbated by a sharp fall in the aggregate operating surplus of this sector in 1986. While partly the result of the weakening of commodity prices, the operational and financial difficulties of NPEs also stemmed from structural

distortions, inefficient management, and inadequate institutional supervision, as well as overindebtedness. Against this background, the creation of new public enterprises and the diversification of existing ones into new lines of activity was discontinued, and the authorities initiated a rehabilitation plan for the public enterprise sector. The reform package encompassed measures to restructure or liquidate certain enterprises and to develop a privatization program.

Although several major and small enterprises have already been privatized, in order to expedite the process, in 1990 the authorities adopted a comprehensive master plan that identifies for privatization in the next several years a significant group of NPEs, accounting for about 10 percent of the capitalization of the Kuala Lumpur Stock Exchange. Effective regulatory safeguards are in place to protect competition where monopolies arise in the privatization process. Employment in privatized companies will be protected for a transitional period and pension rights of staff remain guaranteed. The proceeds from privatization are to be used for retiring government debt.

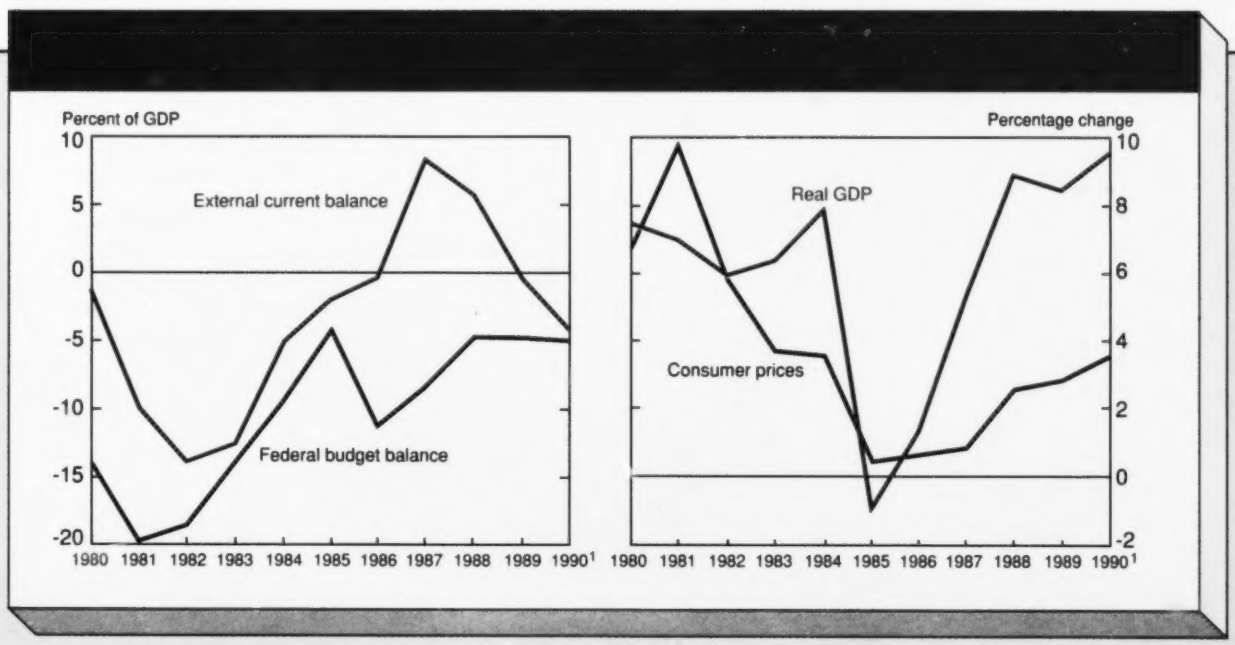
Banking and financial market reforms. To stimulate the economic recovery in which the private sector was designed to play the leading role, monetary policy was relaxed in 1986 and 1987 and the government adopted specific measures to finance new investment in manufacturing, agriculture, tourism, low-cost housing, and the export sector. However, financial institutions remained cautious in lending to private borrowers, given the banks' overexposure to the property sector and a high level of nonperforming loans. The authorities took various steps to consolidate the banking system and to deepen and diversify financial intermediation. Capital requirements and banking supervision were strengthened, and the solvency of commercial banks and finance companies that had to set aside sizable provisions for bad and doubtful claims and interest in suspense was restored through the injection of new capital and a revamping of management. Key steps in the financial sector reform were the adoption in 1989 of a global approach in the supervision of all financial institutions and a uniform risk-based capital adequacy system that determines the capital requirement of financial institutions based on a weighting of on- and off-balance sheet items according to the risk of the exposure. Several other measures were taken to promote an active secondary market in government securities and to stimulate the development of a debt securities market for private corporations.

The positive response of the Malaysian economy to the structural policy initiatives was facilitated by the absence of deeply entrenched inflationary expectations and of trade policies favoring import substitution. . . .

Recovery; improved outlook

The positive response of the Malaysian economy to the structural policy initiatives was facilitated by the absence of deeply entrenched inflationary expectations and of trade policies favoring import substitution—impediments that have hampered recovery in many other developing countries. In marked contrast to the shrinking per capita real incomes of developing countries with debt-servicing difficulties during the 1980s, a vigorous recovery started in Malaysia in 1987, led by a boom in manufactured exports. Beginning in 1988, domestic investment and consumption took over as the main forces behind the economic expansion. Manufactured exports remained strong, however, exceeding one half of total exports by 1989, thus moderating the vulnerability of the external accounts to sharp international commodity price fluctuations. Real GDP growth picked up sharply, with inflation kept well under control.

The external current account balance initially swung into a sizable surplus but weakened to approximate equilibrium by 1989, un-



Sources: Data provided by the Malaysian authorities; and staff estimates.
[1] IMF staff estimates.

der the influence of rising imports of capital and consumer goods. The ratio of foreign debt to GNP continued to fall, reaching 43 percent by 1989, however, while gross external reserves were maintained at a comfortable level. The overall balance of payments was boosted by an unprecedented upturn of equity capital inflows, which more than doubled, to about 5 percent of GNP, in 1989. Foreign direct investment financed about one quarter of private capital formation, mainly channeled to the petroleum sector and export-oriented manufacturing. Economic activity accelerated further in 1990, underpinned by accommodating financial policies, a continued surge in foreign direct investment, as well as the effect of the increase in petroleum prices. As capacity constraints have become more manifest and segments of the labor market have tightened, supply and demand imbalances have intensified, mainly reflected in a weakening of the external current balance.

The current investment boom and the gains in capital efficiency and labor productivity in recent years have laid a solid foundation for strong growth in the medium term. The principal conditions that will help attain this are a smooth transition from the current rapid expansion of demand to a more sustainable pace and the continued commitment of the authorities to the structural reform agenda, including a greater emphasis on human resource development and flexibility in arrangements between employers and employees concerning wage determination.

Malaysia has made considerable strides since independence in reducing the incidence of poverty, in equalizing access to educational opportunities, integrating the labor market, and broadening participation in all productive activities across ethnic groups, as well as in improving the availability of basic health services to the population. These notable successes have been chiefly attributable to and have, in turn, contributed to a generally strong economic performance. The latter was fostered by high investment rates and smooth structural changes, facilitated by stable macroeconomic conditions and a pragmatic approach to the implementation of long-term development plans. The broad thrust of policies in the 1990s is expected to be essentially unchanged, with a more selective targeting of aid programs and a continued pragmatic implementation of the overall strategy to preserve national unity in Malaysia's multiracial society.

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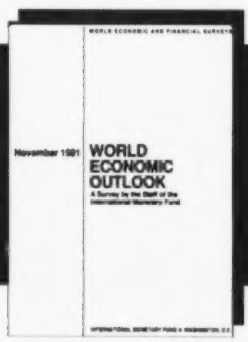

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The Road to Privatization

The issues involved and some lessons from New Zealand's experience

Susan K. Jones

Privatization policies are currently being pursued all over the world. There have been massive privatization programs in the United Kingdom, Japan, and other major industrial countries, as well as in smaller economies such as New Zealand. Developing economies of all sizes, from Argentina to Grenada, have privatized some major utilities, often with the help of multinational corporations.

The size and structure of the public enterprise sector vary significantly within groups of otherwise comparable industrial and developing countries. Although different types of economies have adopted various approaches to privatization, reflecting domestic traditions and political pressures, there are certain general principles and processes that come into any decision to privatize. This article reviews some of these general processes countries have to consider when embarking on the path to privatization. The case of New Zealand, a small open economy where a program of asset sales has recently been completed, is particularly instructive for other countries contemplating such a privatization program.

See also the following articles in previous issues of Finance & Development: *"Lessons of Privatization in Developing Countries," by Helen Nankani (March 1990), "The Experience with Privatization," by Mary Shirley (September 1988), and "Is Privatization the Answer?" by Richard Hemming and Ali Mansoor (September 1988).*

Aspects of privatization

The term "privatization" refers to any shift in activity from the public to the private sector. This could involve merely the introduction of private capital or management expertise into a public sector activity. But more typically, it involves the transfer of ownership of public enterprises to the private sector.

As an economic policy, privatization is based on the view that private ownership and control is more efficient in terms of resource allocation than public ownership. There is a presumption that public and private enterprises have different incentive structures and hence different efficiency outcomes. The traditional academic view has been that when the public and private sectors are compared in terms of costs of producing similar outputs, the private sector outperforms the public sector. Such results, however, should be treated with caution; recently, researchers have reached contradictory conclusions from surveys of a similar body of literature. It appears that there is not necessarily a systematic relationship between private ownership and cost effectiveness of a privatized enterprise.

As a political issue, privatization is extremely divisive, because it represents a reform that necessitates a redistribution of incomes and, usually, a change in employment patterns. Privatization does not necessarily eliminate the monopoly profits, if any,

enjoyed by a public enterprise, but rather creates a marketable claim to those profits that were previously nontradable. A government seeking to privatize would need to take these redistribution effects into account, particularly to ensure that those who might oppose the reform from within the firm are convinced of the need for change.

Several issues come into play in a country's decision to privatize certain enterprises. Both industrial and developing countries that face a heavy debt burden may consider privatization a relatively quick way to reduce public debt by disposing of loss-making enterprises. In the industrial countries, privatization has been used to improve financial return and product (service) quality. Through privatization, an enterprise can gain access to private sector financing, and private owners may bring exposure to new markets. If the sale of public sector assets can be made attractive to small investors, this will broaden share ownership and may spur the development of domestic capital markets.

The process

In what situations will privatization be most successful? Issues of regulation and competition are of foremost importance. A regulatory environment must be in place to prevent privatized concerns from exploiting a monopolistic position. If the full efficiency gains that are potentially available through privatization are to be realized, it is necessary to ensure that privatized markets are "contestable." The standard characteristics of a contestable market are that: existing firms are vulnerable to entry by other firms; all firms (actual and potential) have access to the same production methods (and hence their cost structures are identical); and entry does not involve any sunk costs, that is, costs already incurred and irreversible, so that barriers to entry are minimized. If equilibrium exists in a contestable market, the following characteristics should appear: in any market producing differentiated goods, a wide range of goods will be produced, by single- and multiproduct firms, with no economic profits associated with the production of each good; there will be no cross-subsidization; and industry costs will tend to a minimum.

Aside from contestability, the company's relationship with the government after privatization occurs must also be considered. A clear and binding relationship between the government and the privatized corporation is critical if investors are to be able to predict with reasonable certainty how the corporation is likely to perform. In other words, the degree of government intervention on areas such as regulation, pricing, and public service must be well defined.

. . . there is not necessarily a systematic relationship between private ownership and cost effectiveness of a privatized enterprise.

A related aspect is how to establish arrangements that are acceptable to potential investors, but which at the same time will prevent the corporation from acting against the public interest. If markets are clearly contestable, this problem may be minimized. In smaller developing countries, the government may choose to maintain a majority ownership interest in a firm being privatized. In larger countries, the government may retain a single (largely passive) "golden" share with special voting rights that can be used in well-defined circumstances to protect the public interest.

A final consideration is the manner in which the enterprise is actually sold and the role of overseas and retail markets. At the core of many privatizations is the sale of equity or shares. A distinguishing feature of most privatizations is that the sale will often greatly exceed the size of typical private sector equity offers. Another feature is the political setting of privatization—decisions about the percentage of shares offered to domestic versus foreign buyers, the timing of the share sale, and budgetary impacts of the sale must be made on the basis of the unique characteristics of each enterprise.

Public finance considerations

Assessing the budgetary impact of privatizing a particular enterprise requires several considerations. The objectives of the privatization program will influence the type of privatization adopted, the method of implementation, and the associated policies toward deregulation and financial restructuring. These considerations will impinge on the market value of an enterprise as perceived by potential buyers.

The budgetary impact of a sale encompasses both the net change in the income flow to the government arising from privatization and the change in the net wealth position of the government. In the period when the transfer of ownership occurs, the immediate fiscal impact will reflect the proceeds received from the sale. The market perception of the value of an enterprise will be influenced by prior performance (especially if the firm already has been operated along quasi-commercial lines), prospects for improved profitability, the perceived value of the firm's land, plant and equipment, and the perceived policy environment in which the firm will operate. Frequently, however, political or budgetary pressure cause sales to occur at below-fair-market prices.

The transactions costs of selling public assets are fairly high, even in countries where capital markets are well developed. These costs tend to be even higher in developing countries where capital markets are less sophisticated, thus limiting the possibility of offering public assets on the domestic capital market. But fears of foreign economic dominance may cause the government to limit foreign equity holdings or the sale of public enterprises on international capital markets. In most cases the government, particularly in less developed countries, can benefit from the potential buyers, whose staffs are often much better equipped to investigate the possible worth of the asset. However, heavy costs can occur at the stage of underwriting a share issue. In many respects, the government may be in a better position to absorb the risk of underwriting than the private sector, because it does not face the cash flow constraint of a private underwriting firm.

Once the sale has occurred, the cash flow position of the government vis-à-vis the enterprise may shift for several reasons. If private enterprises are subject to taxation on their operating profits, the government would then receive some of its income from the privatized enterprise in the form of corporate tax payments. The sales price presumably reflects the discounted stream of after-tax profits following privatization. In principle, full privatization would lead to a shift in profit remittances from the government budget to the private shareholders, net of any retained earnings used for reinvestment.

After privatization, the government would in most cases be able to suspend current transfers or subsidies that had been made to the enterprise, unless the government had specific policy objectives (e.g., low utility prices, employment targets, and development priorities). Capital transfers and government net lending to the enterprise may be more difficult to terminate, especially where the government had guaranteed the original loans. Clearly, the status of government guarantees

on loans received by public enterprises must be clarified at the time of privatization.

The use of the sale proceeds from a privatization program may be used either to reduce the government's deficit by reducing its debt, or perhaps less favorably, to finance tax cuts or expenditure increases. Political pressure, however, often leads to decisions to use the proceeds for increased expenditure or tax reduction, rather than for deficit reduction.

New Zealand's experience

New Zealand is a good case study of many of the issues mentioned above facing a small open economy embarking on a privatization program. In the mid-1980s, public sector involvement in marketable activities in New Zealand amounted to about 12 percent of GDP. Since 1984, the Government has tried to extricate itself from several commercial activities, with the objective of improving cost efficiency. Prudently, the main fiscal goal of the privatization program was to reduce the large public debt, rather than to use the proceeds for increased expenditure or tax reduction.

A first step in the process was to put the state-owned enterprises (SOEs) on a commercial basis, while still retaining government ownership—a process called "corporatization." This was done to identify the financial position of the enterprises to facilitate improved efficiency and to make them marketable. As discussed above, and typical of an industrial country, the aim was to improve both the financial and service performance of the enterprises. And performance did improve: financial reports for 1988 showed that eight of the nine SOEs were operating profitably, although the rates of return on capital were still below those in the private sector.

In April 1987, nine large government departments were transformed into SOEs as public corporations, and by December, a formal announcement was made that these enterprises would be sold to reduce public debt. The corporations for sale were engaged in sectors such as steel, oil, insurance, airlines, hotels, computing services, forestry, banking, and telecommunications. Recognizing the diverse nature and size of these enterprises in the Government's portfolio, the managers of the program assessed the method and timing of sales individually, while seeking to maximize economic efficiency. Creating a regulatory regime that would promote contestable markets was a clear goal of the program.

Various methods of privatization were tried, with varying degrees of success: partial as well as full sales of equity; combinations of strategic stake sales; share floats on both the domestic and international sharemarkets; full sales to single buyers and to consortia; and sales of rights, as in the case of cutting rights to state forests. Considerations as to the percentage of shares offered to domestic versus foreign buyers, as well as the timing and budgetary impacts of the sales, were the most problematic and were unique in the case of each enterprise sold.

In New Zealand . . . prudently, the main fiscal goal of the privatization program was to reduce the large public debt, rather than to use the proceeds for increased expenditure or tax reduction.

Several lessons emerged in the course of the enterprise sales. First, full privatization was more successful than partial privatization. Although partial privatization was politically more feasible, it raised long-term problems. The partial sale of shares in Petrocorp, New Zealand's largest oil and gas company, illustrated some of these difficulties. For instance, it was found that private sector minority shareholders were in a good position to "capture" management and thus influence future share sales in a direction contrary to the public sector goals or interests at the time. Private interests led the business to take higher risks than the government would take on its own. Partial ownership also made it difficult to change the regulatory environment due to conflicting private and public interests.

Second, open bids for purchase of an enterprise were found to be superior to share market sales. As discussed earlier, for a small country like New Zealand, the size of public enterprises for sale often surpassed the scale of typical private market sales, and the capital market was not deep enough to absorb significant amounts of shares. In order to get the best value for the taxpayer, it was necessary to ensure that foreign bidders were attracted into the sales process. Selling an asset with an open bid also removed the pricing of individual blocks of shares from the pressure of the political process and eliminated underwriting problems for the Government.

These lessons proved instructive in the sale of New Zealand Telecom. The enterprise was sold to a consortium (including two New Zealand and two US companies) on September 12, 1990, and was by far the biggest transaction in New Zealand's history. Despite the large size of Telecom, the Government had learned that the best method of sale was to fully privatize the enterprise and to avoid a direct share market sale. The consortium purchased 100 percent of the Telecom assets, with payments spread over six months. This deferred payment structure was devised to minimize disruption to money markets.

Under the terms of the sale, the two New Zealand partners would purchase 10 percent of the shares over three years. The two US partners would each own just under 25 percent of the shares, so jointly they would own just less than half the shares, to ensure a minority interest. The board of directors comprised a majority of New Zealanders. To avoid overwhelming markets with the Telecom shares, the remaining 40 percent of the shares would be floated in two or more tranches on the New Zealand share market, as well as in international markets when favorable market conditions prevailed.

The Telecom sale proceeded very smoothly for several reasons. First, as mentioned previously, the sale benefited from extensive research by the consortium partners on the financial worth and potential of the enterprise. Second, the existing staff within Telecom were supportive of the sale. Third, firm agreements were reached on the details of the sale prior to its announcement.

The actual sales price for Telecom was far higher than financial market expectations. Because of this windfall, the Government was tempted to use a portion of the proceeds for public capital expenditure, despite the original goal of debt reduction. Nonetheless, with this single sale, the Government was able to reduce public debt by nearly 12 percent and conclude its asset sales program begun in 1987. A total of NZ$ 9 billion (US$ 5.6 billion) in assets were sold, and public debt was reduced from 80 percent of GDP in 1987 to an estimated 53 percent in 1990. ■

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Improving Rural Finance in Developing Countries

The record on directed and subsidized credit to farmers has been poor. Sound policy reforms, therefore, need to tackle the defects of the institutional structure of the particular rural economy

Avishay Braverman and Monika Huppi

Over the last three decades, governments in many developing countries have intervened heavily in rural financial markets. Their intervention has been motivated by the belief that a shortage of affordable credit constrained agricultural growth and development and prevented the integration of small farmers into the market economy. The most frequent forms of intervention have been administrative allocation of funds, interest rate ceilings, and establishment of specialized rural finance institutions. Many donors have actively supported these interventions. For example, about one fourth of all World Bank lending to agriculture during the 1980s, or $9.7 billion, went to agricultural credit.

The performance of most credit programs has, however, fallen short of expectations. Although various factors account for the limited success of subsidized credit programs, the failure of these programs can at least partially be attributed to defects within the institutions designated to carry them out and, in part, to the assumptions underlying past policies. As a result, a growing literature is developing that seeks alternative forms in managing and channeling credit to rural markets, that could eradicate or at least significantly reduce the problems previously encountered.

It is questionable whether abolishing credit subsidies alone would eliminate the major inefficiencies that currently afflict rural credit systems in developing countries. It is also doubtful that a simple laissez-faire policy would effectively reach small farmers with institutional rural credit and counter other market failures. Under certain circumstances, interventions in the rural financial markets of developing countries may still be warranted, provided acceptable institutional structures exist to administer such programs.

Reasons for intervention

The main justification for intervention in rural credit markets has been a perceived shortage of affordable credit, which has generally been attributed to imperfections in rural financial markets, and the discrepancy between private and social rates of return.

Because of the seasonal nature of agricultural operations, cash flows and cash needs of rural producers are not synchronized. In addition, the income of agricultural producers is highly influenced by climatic conditions. Hence, lending to agriculture is more difficult than regular commercial lending. Lending in rural areas often implies servicing a geographically dispersed clientele, which increases transaction costs. Administratively imposed ceilings on interest rates have often

This article draws heavily on the work carried out by the Agricultural Policies Division, as well as work by researchers outside the Bank. For example, see "Rural Credit in Developing Countries" by Avishay Braverman and J. Luis Guasch, Policy, Planning, and Research Working Paper No. 219, The World Bank, and "The Role of Groups and Credit Cooperatives in Rural Lending," by Monika Huppi and Gershon Feder, The World Bank Research Observer, July 1990.

prevented commercial lenders from passing on fully these costs to borrowers. Together with the frequent absence of collateral and difficulties in enforcing contractual obligations, all the preceding factors tend to discourage commercial banks from engaging in rural lending.

Where commercial lending institutions are active in rural areas, they almost exclusively cater to large farmers. Lending to small farmers is a problem because of the substantial unit costs in processing and administering small loans, lack of collateral and the often unjustified belief that small agents are bigger risks than large farmers.

The absence of strong formal credit markets has given rise to informal financial markets in rural areas of many developing countries. Most of these markets are characterized by relatively quick disbursement of funds and low transaction costs. But they have high interest rates due to such factors as high risk, limited diversification of the loan portfolio, and, sometimes, monopoly rents. While it is not uncommon for friends and relatives to lend at zero interest (or even negative rates in real terms), money lenders have been found to charge 200 percent or more. A study among rice farmers in the Philippines, for example, found that 15 percent of the producers paid more than 200 percent in interest on their loans from the informal market, while 20 percent of them had loans at zero interest rates. In Chile, studies show that relatives, friends, and patrons lent to farmers at zero or even negative interest rates, while stores, traders, and moneylenders lent at rates as high as 360 percent.

Private banks' reluctance to lend to agriculture in general, and to small farmers in particular, and the uncertainty regarding the availability of high interest credit in the informal market, have been the main reasons for government intervention in rural financial markets. It has also been argued that the limited availability of affordable capital delays, if not prevents, the adoption of new production technologies and the use of nonlabor inputs such as fertilizer. This, in turn, slows down output growth and the development of the agricultural sector. Finally, governments often intervene and attempt to compensate farmers for the adverse effects of "urban biased" pricing (i.e., government policies that favor residents of the urban sector over rural inhabitants), taxes, and exchange rate policies.

To overcome the paucity in formal rural lending, governments, often supported by international donors, have frequently established specialized agricultural credit institutions. While these institutions have been provided with cheap government or donor funds, they have often had to follow administrative guidelines, rather than creditworthiness criteria, in allocating their credit. To guarantee availability of cheap funds, governments have often imposed low interest rate ceilings on all formal lenders. But such ceilings have had adverse effects, preventing these lenders from covering their operating expenses and loan losses. As a result, governments have had to intervene to cover such bills. In some cases, governments have even covered part of interest payments for certain categories of borrowers from these lending institutions (for example, small-scale farmers or producers of a specific crop). High rediscount margins have allowed rural financial intermediaries to only finance a small part of the granted subloans themselves, while the rest has been financed by the central bank at subsidized rates. Nonrural financial intermediaries have frequently been obliged to buy obligatory bonds yielding below-market rates. The proceeds of these transactions have then been made available to rural financial intermediaries.

Effects of rural credit programs

The effects of three decades of intervention in rural financial markets have, unfortunately, been dismal. A number of case studies have shown that the availability of subsidized credit has had little, if any, effect on agricultural productivity. Unless lenders employ strict (and often costly) supervision, the fungibility of money makes it difficult to guarantee that borrowers use funds to finance agricultural investments. Further, it is impossible to ensure that borrowed funds are used to finance higher investment than would have taken place without subsidized credit. Credit project evaluations in countries as diverse as Kenya, Mexico, and the Philippines, for example, have found that the use of funds for purposes other than the ones stated at the time of borrowing was a major factor that severely limited the programs' effects on productivity increases. One argument often used in favor of credit subsidies is that they compensate farmers for the adverse effects of other policies. This is, however, doubtful as subsidized credit does not make investments in agriculture more profitable, and such funds could well be diverted to other, more lucrative, undertakings. But even to the extent that subsidized credit does compensate producers for urban biased policies, it only benefits the few who actually have access to such funds.

Despite the remarkable expansion of credit in rural areas of most developing countries, the distribution of official credit has remained skewed in favor of large farmers. An estimated five percent of farms in Africa, and about 15 percent in Asia and Latin America, have had access to formal credit, with five percent of borrowers often receiving as much as 80 percent of the credit. Thus, instead of narrowing income inequalities, low interest credit programs have often increased them. Since large farmers generally borrow larger amounts than small producers, the former benefit more from credit subsidies than the latter. When interest rates do not reflect the true cost of capital, the distribution of benefits from official loans is generally even more regressive. Cheap funds lead to excess demand of capital, so that subsidized loans must be rationed. Because rural lenders prefer large borrowers (especially when low interest rate ceilings do not allow them to cover the higher transaction costs involved in lending to small farmers), small farmers tend to be rationed first.

The continuous availability of cheap funds and ceilings on interest rates have prevented specialized agricultural credit institutions and other formal lenders from mobilizing rural savings and thus building up their own sources of funds. Specialized agricultural lending institutions have, therefore, never developed into true and viable financial intermediaries between net savers and net borrowers. Studies in rural areas of various developing countries have, however, shown that even small producers in poor areas can and do save significant amounts, if given the opportunity to do so. The problem, therefore, is not so much a shortage of funds in a particular area, but rather a lack of possibilities to manage liquidity over time. Credit unions and other credit cooperatives in Cameroon, Guatemala, Rwanda, South Korea, Taiwan Province of China, and Togo, for example, have been very successful in mobilizing savings in rural areas. Extensive saving mobilization campaigns and innovative offers for deposits adapted to local rural conditions have helped many of these credit cooperatives to increase their own funds and attain near self-sufficiency in terms of funding. In Rwanda, where credit unions were created for the specific purpose of mobilizing rural savings, membership grew by 47 percent between 1977–86, with real savings growing at an average annual rate of 35 percent. Similarly, in Togo and Cameroon, real savings mobilized by credit unions grew at an average annual rate of 25 percent and 14.5 percent, respectively, during the same time period.

Government-supported rural credit institutions with limited accountability have also lacked the incentives to effectively monitor investment and repayment behaviors of their borrowers. The performance of such credit institutions have often been based on quick loan

approval and growth of the lending volume, rather than on financial performance. This has facilitated willful loan defaults. For instance, default rates as high as 50 percent were observed in India, 71 percent in Bangladesh, and 40 percent in Malaysia and Nepal. And in Thailand, over 50 percent of the loans made through the cooperative system were in arrears in the 1980s. Inefficiencies and incompetent management in rural finance institutions have further encouraged high default rates. Deficient accounting practices and inadequate record keeping, for example, can make it difficult to determine when payments are overdue and loan agreements must be enforced. Default rates in most subsidized rural credit systems have, therefore, been excessively high and cannot be merely attributed to higher risks associated with agricultural production. Recovery rates of 50 percent and lower have frequently plagued agricultural credit systems in developing countries.

The incentives to actively enforce loan agreements and collect repayments have sometimes further been weakened by government-backed crop insurance schemes, which have shifted part of the recovery risk to other agencies.

Reforming rural finance

Purely supply driven credit schemes must be transformed into self-sustainable systems and rural financial intermediaries must become viable and self-carrying agents. While market failures in rural financial markets may call for active government and donor involvement, it must be realized that any form of intervention can only effectively counter these deficiencies if adequate institutional structures exist. Intervention in rural financial markets of developing countries should thus, above all, focus on restructuring and strengthening rural financial institutions and removing obstacles to the efficient functioning of rural credit markets. This includes elimination of monopolistic practices regarding access to government rediscounting facilities, tighter targeting of small farmers along with gradual removal of subsidies, and deregulation of interest rates, to allow for full cost recovery.

Existing rural financial institutions must be restructured in a way that they can eventually function in a competitive environment. They must be encouraged to spread their risks through portfolio diversification and thus start lending to rural enterprises other than agriculture. To the extent possible, they must be induced to mobilize their own resources through the provision of savings facilities.

Further, these institutions must be streamlined and required to face strict accountability and profit constraints. Governments and donors must thus stop financing recurrent deficits incurred by these institutions and rural financial intermediaries must be allowed to cover their costs with higher interest rates. Managers, supervisors, and loan officers of rural finance institutions must be provided with the incentives to screen loan applications, monitor investment and repayment performance, and enforce loan contracts. Strict accounting and auditing procedures, rewards according to performance (including loan collection), and rotation of key employees can help make a financial institution more efficient, while lowering the possible losses through misallocation and patronage.

While external funds may be necessary to help restructure institutions and help them get off the ground, donor and government funds should primarily be used for institution building purposes. This includes proper training of managers, supervisors, and loan officers, and the introduction of adequate accounting, auditing, and management information systems.

Borrowers must face an incentive structure that induces them to repay their loans. Certain successful group lending and credit cooperative arrangements have shown that some form of joint responsibility or liability by small groups of farmers can also enhance repayment.

Given the overall adverse effects of subsidized credit programs, the general continuation of credit subsidies has to be seriously questioned. Liberalization of interest rates for lending to agriculture would allow rural financial intermediaries to cover their operational costs. They could then be required to operate as financial entities which face bona fide profit constraints. Market interest rates may also encourage financial intermediaries to effectively mobilize rural savings. This would make them more independent from external financial sources, while making them responsible for managing their own funds. Market rates decrease the incentives for patronage and arbitrary decisions, and can thus help improve the regressive character of subsidized credit programs. Experience has shown that the price of loans is a relatively unimportant factor in inducing farmers to borrow. Much more important are timely services and simple application and disbursement procedures.

The question remains, however, whether freeing up interest rates will give small farmers enough access to formal credit. Liberalized interest rates can be expected to decrease overall demand of credit, so that small farmers' access to funds should to a certain extent be improved. High transaction costs and lack of significant collateral, however, may still prevent them from borrowing the desired amount, so that intervention in their favor may be called for.

Alternative institutional arrangements, such as lending groups and credit cooperatives, have the potential to reduce transaction costs, because they allow for the processing of one large loan rather than numerous small loans. Administrative responsibilities such as loan allocation within the group, record keeping, and loan collection may then be taken over by the group. Familiarity among group members or between the cooperative management and its members also allows the reduction of informational costs linked to the reduction of adverse selection and moral hazard behavior.

Experience with organized credit groups or cooperatives has been mixed to date, but their limited success appears to be due to shortcomings in their implementation and general deficiencies, such as low interest rates, rather than inadequacy of the approaches themselves. Successful group lending programs have shown that factors such as homogeneous borrowing groups that are jointly liable and assume themselves some managerial and supervisory responsibilities, a common bond other than credit, and denying access to future credit to the whole group in case of default by any member, are crucial elements. Important factors for successful outcomes of credit cooperatives include institutional development, extensive training at all levels, savings mobilization, slow expansion of cooperative activities, and strict monitoring and auditing. ■

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The Need to Change Health Care Priorities in LDCs

Strengthening the private sector in hospital and other curative services will allow governments to redirect resources toward public health

Charles C. Griffin

Almost a fifth of the world's population lives in poor countries where average life expectancy is 54 years, 22 years lower than in the industrialized world. Much of this persistent difference is due to poverty, but it is exacerbated by public health policies that fail to control adequately preventable parasitic and infectious diseases, malnutrition, unhealthy environmental conditions, and related problems. In Latin America, infectious and parasitic diseases cause approximately as many deaths as do circulatory diseases; in Asia, they cause 1.6 times as many deaths; in the Middle East, the ratio is 2.4; in Sub-Saharan Africa, it is 3.7. In industrialized countries, it is only 0.2. The disease patterns plaguing poorer countries can for the most part be solved through public health interventions or simple curative services. But the patterns of public expenditures stand in the way of such a change.

Ministries of health in developing countries face some well-documented problems, largely because of heavy public spending on hospitals and other curative services from which individuals, rather than the country as a whole, are the primary beneficiaries (see also "Financing of Health Services in LDCs," by John Akin and Nancy Birdsall, *Finance & Development*, June 1987). In Bangladesh, for example, recurrent costs for a single hospital bed serving about 27 patients per year are roughly $2,700, about the same as a rural health clinic serving 10,000 patients a year. Pilot projects have shown that if another $1,300—half the cost of a hospital bed—were spent on each rural clinic annually, attendances would nearly double. Thus, at the margin, hospital resources devoted to 13 urban hospital patients would allow rural clinics to treat another 7–10,000 patients. In practice, governments have found it difficult to make such reallocations. This article explores how private sector involvement in delivering curative services, especially hospital services, could release funds for such reallocations.

High hospital spending

While it is true that hospitals are needed under any circumstances, when does spending on them become exorbitant? First, con-

This article is drawn from "Strengthening Health Services in Developing Countries through the Private Sector," by Charles C. Griffin, International Finance Corporation Discussion Paper Number 4.

sider the range of health expenditures in the world. The United States spends the most, with total (government plus private) spending of $1,926 per person in 1986. In the United Kingdom, health care expenditure was $711 per person. Among middle-income countries, per capita spending in Brazil was about $85; in the Republic of Korea, about $150; and in Malaysia, about $50. Among the poorest countries, spending per capita in China was about $11; while in Bangladesh, Ethiopia, and Zaire, about $3 (0.2 percent of the US total).

A comparison between industrialized and developing countries is instructive. The industrialized countries—which have high spending, older populations, and disease patterns dominated by cancer and circulatory diseases—allocate slightly less than 50 percent of total health expenditures to hospital services. Developing countries tend to spend at least this fraction of public budgets on hospitals. Typically, the least developed countries spend 60 to 80 percent of public health budgets on urban hospitals even though only a small fraction of the population will ever need hospital services, and despite the fact that 80 percent live in rural areas, well beyond the reach of the costliest facilities. In some African countries, where improvement in health indicators has lagged well behind other world regions over the last two decades, a single national hospital may consume 75 percent of the government health budget.

Myanmar (formerly known as "Burma"), a country that devotes an extraordinarily low 33 percent of its public budget to hospitals, spends about half that amount to treat patients with preventable infectious and parasitic diseases. At least 2.5 percent of the national health budget in 1986 was spent to treat malaria patients in hospitals, the most expensive and least effective way to solve that health problem. In Brazil, a country that has made tremendous advances in health over the last two decades but still faces serious public health problems, 70 percent of government spending is for hospital care.

In Bangladesh, where 12 percent of newborns die before age 1, the government spent a little over $1 per capita on health care in 1987, at least 56 percent of it through hospitals. Little or none of that spending reached vulnerable infants and their mothers; the bulk went to 700,000 hospital patients, mostly adults, accounting for only about a half percent of the population.

What has been done?

Governments have attempted to reduce the relative burden of hospitals by raising total spending on health and allocating most of the increment to primary health programs in rural areas. This strategy has, at best, met with mixed success. Between 1972 and 1983, central government expenditure on health actually fell as a percent of total expenditure in developing countries. But the resulting constrained budgets were skewed toward hospitals and other curative services. Adjustment policies in the 1980s put even more pressure on this strategy.

In Indonesia, for example, central government spending on health fell in real terms by 32 percent between 1985 and 1988. Real spending on hospitals fell by 23 percent; on health centers, by 27 percent; and on communicable disease control, by 72 percent. Recurrent spending on curative services through hospitals and health centers was maintained by cutting investment budgets; in contrast, communicable disease control cuts came out of services. Of 20 disease programs funded in 1986, only 3 (malaria, schistosomiasis, and child immunizations) received any funding in 1988, and those programs covered only selected provinces. The commitment to maintain curative services distorted government priorities.

"Privatizing" hospitals

Developing country governments, particularly the poorest ones with the worst health conditions, cannot afford to spend more than 40 percent of their budgets on hospitals (that is about what the United States spends), and substantially less than that fraction would make sense for redirecting government resources toward public health measures. One way to allow governments to concentrate on public health is to privatize hospitals and remove them from government budgets. Other curative services also could be handled in this way. In health, privatization means turning hospitals over to both for-profit and not-for-profit entities, the latter being more common. How can this be done? In some cases, hospitals are such a large drain on the public budget that giving them away would be less expensive than keeping them. Alternatively, part or all of the government capital tied up in hospitals could be sold or rented to private firms, charitable organizations, or hospital trusts. Governments could remove themselves from the hospital business to some degree by closing old and inefficient public hospitals and encouraging the private sector to absorb the burden.

Developing countries have yet to experiment systematically with these options. However, there has been a recent surge of interest in them based on the experiences of some countries. China's health miracle has been almost exclusively attributed to social and political changes, but little attention has been paid to the manner in which its health system is financed. Almost all curative care is financed through private payments, even if delivered by public entities. Public hospitals are largely self-financing and behave for all practical purposes as if they were private institutions. Government subsidies are provided primarily for indigents; insurance and individuals pay for the rest. The government's priorities have been to create risk-sharing institutions to pay for inpatient care, to train health workers, and to solve public health problems. Despite per capita income of $330 per year, almost 60 percent of China's population is covered by some type of health insurance. China's approach does not eliminate hospital spending by any means—it is high and growing partially because of the country's success in raising life expectancy—but it does make individuals and social insurance bear the largest share of the burden, leaving the government to pursue other, more "public" activities.

In the late 1980s, Kenya converted Kenyatta National Hospital into a parastatal, a move that holds great promise for controlling Kenyatta's previous pre-emptive claim on the health ministry's budget. In Chile, the national health service was converted into 26 public corporations in the late 1970s, with continuing public subsidies to them only partially covering their costs and keyed to performance. Sri Jayewardenapura Hospital in Colombo, Sri Lanka, was opened in the mid 1980s as an independent government institution operated almost as a self-financing joint practice by its staff and attending physicians, with fees for all services and all patients.

Contracting from the private sector

Removing hospitals from the government budget is possibly too radical a proposal for some governments. Realistically, governments will continue to finance hospital services for some people. But they need not deliver the services directly. In fact, one of the main hindrances to the development of the private hospital sector in developing countries, apart from the competition of free public hospitals, is the lack of a payment mechanism that covers large bills. Governments can help solve these problems by reducing the direct provision of free services and helping to construct some form of hospital insurance or social financing for patients in the private sector.

This approach is well developed in the industrialized world. In the United Kingdom, the National Health Service contracts with general practitioners to provide clinic services and pays them on a prepaid capitation basis. Recent proposals by the Government suggest

extending this approach to the provision of inpatient care, with the newly independent public hospitals competing with private hospitals for contracts to provide services to district health authorities. Both Australia and Canada already have comparable systems, in which almost all care is provided through the private sector, but virtually all payments come from the public sector.

Similar practices are common in the social security institutions of Latin American countries, many of which provide a payment mechanism but do not provide all health services directly. Uruguay's social security system provides medical care to 45 percent of its population, largely through 23 nongovernment health maintenance organizations (HMOs) that are closely regulated by the social security agency. Chile's recent reforms have allowed workers to use their social security health premiums to purchase insurance in private markets, contributing to the development of a private sector that competes with public facilities that previously enjoyed monopoly status.

Up to 1981, Brazil's social security agency took this approach a step further by allowing firms to contract directly with HMOs using a portion of their social security contributions. Over 200 HMOs were organized to meet the demand. By the mid-1980s, HMOs or other prepaid systems covered an estimated 17 million people (about 12 percent of the population). Brazil's social security system itself contracted with private hospitals and physicians to provide 67 percent of hospitalizations in the late 1980s, at about a third of the cost per hospitalization as in the public sector. Although some of this huge difference can be explained by more serious illnesses and sicker patients in the public sector, neither accounts for more than a small fraction of it.

When government or social security systems choose to finance hospital care in this manner, they can adjust their contributions by altering covered services, changing copayment or deductible requirements, adjusting eligibility requirements, or revising reimbursement rates. They do not have to maintain costly hospitals and staff directly, and the institutions in turn are free to seek other revenue sources. The Republic of Korea, for example, provides assistance to patients based on need, forces doctors and hospitals to accept lower-than-standard fees for such patients, and offers low-cost loans to individuals for parts of the bill not covered. Such an approach gives the government many more policy levers to control costs and target subsidies than if it simply provides all services for free from government hospitals, rationing care by queue.

The same principles extend to curative services provided through clinics. A number of African countries have long experience in contracting with charitable or religious organizations to provide both clinic and hospital services in areas where the government system does not reach or where their services would prove redundant. In Zaire, health services in rural areas are provided by government, charitable, and private sector providers through loosely organized "health zones." Primary responsibility for some zones is delegated to mission facilities, with the government playing only a minor financial role. In principle, there is no reason that for-profit groups could not enjoy the same status, competing for government contracts to manage health zones.

In Papua New Guinea, the government has contributed to the capital costs of mission facilities and provides substantial support for recurrent costs. A recent analysis found that this practice improved redistributive aspects of government health spending because mission facilities tended to be located in poor, high mortality areas. A separate study of 73 randomly selected rural facilities, about evenly divided between government and mission institutions, gave the mission facilities about a 15 percent higher quality rating than government facilities on average, yet outpatient costs in the mission facilities were about 43 percent lower per patient. Both types of facilities used comparable labor inputs. The Government has not considered the possibility that the same relationship it has developed with the mission sector could be used to privatize inefficient government clinics.

Improving public sector efficiency

Although these examples offer considerable scope for removing a large share of curative care costs from government budgets, there are many intermediate measures governments can use to take greater advantage of the private sector. Such activities can reduce costs to the government and raise the quality of services. Government contracts can build up private sector institutions that will eventually be able to absorb large-scale operations like a hospital. In Jamaica, for example, the Ministry of Health began contracting out housekeeping, janitorial, catering, and laundry services in three Kingston hospitals in 1987. In the first year, the government saved about 50 percent of the previous cost, in combination with significantly improved services. In 1986, the Costa Rican social security system began privatizing some ancillary services, such as lenses for vision correction and hospital laundry services. It is also exploring privatization of many other activities, including subsidies for clinics housed within large companies and capitated payments for "lists" of patients to private sector physicians (on the British model).

Underdevelopment of the private sector can impose hidden costs. Spending by individuals and insurance companies on private services is often greater than spending by the government for health care. Goods or services from the private sector are expensive because firms are too small to purchase in bulk. Governments can reduce private sector costs either by providing contracts for large purchases or by using their market power to supply lower cost goods. Papua New Guinea, for example, operates a bulk-purchasing operation that is able to obtain many drugs on world markets at about a 50 percent savings over the wholesale price paid by small private pharmacies. An arrangement through which private pharmacies use the public sector as a wholesaler holds potential to reduce drug costs, regardless of whether patients use the public or private sector.

Conclusion

Governments face serious problems in the health sector, especially in the area of curative health services. Exploitation of the private sector to provide high-cost curative services will allow governments to divert their meager health resources to activities that are more appropriate to the health problems faced by their citizens. The major constraint is the development of appropriate financing mechanisms for private hospital care and contractual relationships for some aspects of outpatient or clinic care. The private sector has a demonstrated ability to respond in countries that have created such mechanisms or incentives. Greater involvement of the private sector will not entirely relieve the government of the burden of curative care, but it should allow governments to better focus their efforts and to create more effective and fairer health care systems. ■

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BOOKS

W.W. Rostow

Theorists of Economic Growth from David Hume to the Present

Oxford University Press, New York, NY, USA, 1990, xx + 712 pp., $39.95.

The end of all production is consumption, and more is better. Philosophers and spiritualists may disagree, but economists will explain this dictum in terms of broadening choices and horizons, increasing opportunities and freedoms: in brief, having a more "fulfilled" life. What makes an economy grow, and its members more prosperous, is central to the discipline of economics.

Rostow's new book is a delight: panoramic, rich, lucid, and enlivened by humor (a quality for which the "dismal science" is not especially noted). Readers can approach this work at many levels; as a work of reference, for the occasional deeper foray, or, for the true economic "crescophile," to peruse from cover to cover. The contributions of the major economists (all the big names are here) on various aspects of growth are presented succinctly and within each one's broader vision of society.

Only one chapter is devoted to development economics—the postwar academic phenomenon on which countless PhD theses were sacrificed, to say nothing of the forests that had to be cut down, the meetings and conferences that had to be suffered through, the institutes that had to be founded—all in the name of what? The assumptions (perhaps ideology would be a better word) on which this enterprise was based—that public policies (wholesale government intervention and planning, buttressed by foreign aid) could "solve" the problems of underdevelopment and accelerate the development process—have crumbled; noted development economists have been busy composing their *mea culpas*. One need shed no tears for economists (who have done quite well out of it all) but the sorry aspect of much development economics is the influence it exerted on economic "strategies," in engendering policies that have, in many places, resulted in stunted, distorted, and stagnant economies.

We do not have a single, universal theory of economic growth: the process depends too much on noneconomic factors, which are diverse, changing, and impossible to theorize. Furthermore, the very idea of growth, or "growthmanship," has come under renewed attack in recent years. An increment in GNP in itself means little unless due attention is paid to the quality of growth and to other issues such as environmental damage, depletion of resources, democracy, and liberty. Rostow alludes to all of this, but had his book been written a few years hence, he might have felt impelled to devote considerably greater space to the discussion of the noneconomic dimensions of growth. Also, history is not being kind to Rostow: several of the issues referred to in the penultimate chapter (the debate about economic systems, the appropriate role of government, the cold war) have been more or less settled—at least for now. And Soviet citizens may be comforted to know that, according to Rostow's taxonomy (p. 446), they have been in the "high mass consumption" group of countries since the mid-1950s.

Rostow has performed a valuable service. His book is a major publication in the history of economic thought. He is a devotee (if not inventor) of the stages-of-growth approach; with this tome he reaches the highest stage.

Bahram Nowzad

Janos Kornai

The Road to a Free Economy

W.W. Norton, New York, NY, USA, 1990, 224 pp., $8.95.

Professor Kornai, the eminent East European economist, departs from his usual academic format to write a tract for the layman, focusing on specific Hungarian circumstances, but applicable to other planned economies moving toward a market system. Although written in nontechnical language, this is a detailed, tightly reasoned piece of economic analysis. Its main contribution is to demonstrate that the two main tasks of economic policy facing East European countries—namely, the creation of a market economy and macroeconomic stabilization—are closely related. While recognizing that the first of these tasks cannot be accomplished overnight, he also insists that strong measures to encourage the private sector at the outset are a precondition for a successful stabilization program, and that a middle road of "market socialism" is doomed to failure.

Kornai first discusses the details of transforming a system of socialist planning into a liberal market economy; then, against this background, demonstrates the chief measures that must be taken to eliminate inflation, minimize unemployment (which inevitably results from restructuring the economy), and maintain a viable balance of payments position. In discussing the creation of a market economy—in a chapter entitled simply "Ownership"—Kornai emphasizes a legal framework that enforces contracts and accords freedom to private economic units to acquire and sell property, set prices and wages, and engage in foreign trade and foreign currency transactions. State enterprises, he argues, can be privatized only gradually and should not be "sold to foreign countries at rock-bottom prices, as if at a liquidation sale." The management of state enterprises therefore continues to be a problem: Kornai argues for an element of political control, to ensure, inter alia, that the private sector receives an adequate share of available credit.

In analyzing stabilization policies, Kornai places strong emphasis on halting inflation through tight fiscal and monetary policies: state enterprises should not be bailed out through either subsidies or easy credit. Fiscal deficits would be reduced by drastic reductions in consumption and production subsidies and by introducing a nonprogressive tax system

based on consumption (e.g., value-added), payroll and profit taxes. The non-progressivity of these taxes is justified by the need to stimulate production and investment. To accomplish these ends, however, the tax measures must be accompanied by price liberalization, a uniform exchange rate, and liberalization of foreign trade and exchange transactions. Eventually, the central bank should establish a convertible forint, but until this is possible, free market transactions should be permitted. Western aid should be mobilized and foreign debts renegotiated. All these actions should be as simultaneous as possible: Kornai trenchantly demonstrates how failure in one area negates progress in another.

Throughout this analysis and in a final section, Kornai discusses social and political issues. While private enterprise must be encouraged, there needs to be "humanitarian aid" for the dislocated and poor; the fiscal consequences of this aid are not deeply explored. In arguing that his program should receive strong political support from a people tired of past failures, Kornai's tone is as much hortatory as analytical.

Anthony Lanyi

Paul Krugman

The Age of Diminished Expectations

U.S. Economic Policy in the 1990s

MIT Press, Cambridge, MA, USA, 1990, xii + 204 pp., $17.95.

Henry R. Nau

The Myth of America's Decline

Leading the World Economy into the 1990s

Oxford University Press, New York, NY, USA, 1990, 424 pp., $29.95.

The authors of both volumes agree that the US economy is not doing well and that, if present policies continue, the United States could fall behind in terms of economic power by the year 2000. There the similarity ends. Krugman's theme is that the US public has come to accept a performance that is decidedly poor, certainly compared with what might have been expected some 20 years ago when the United States was enjoying a great postwar boom. Although the United States has had some economic successes since 1980, notably reduced inflation and increased job creation, the failures are profound. They are, of course, in the very areas that we all read, or hear about daily: a marked slowdown in productivity, a leveling off of a growth in real wages, increased inequality of income distribution, an increase in poverty in both extent and severity, a persistent trade deficit that has made the United States dependent on large capital inflows from abroad, gyrations in the value of the dollar, a huge seemingly intractable budget deficit, and mounting public debt. In addition, there is a savings and loan debacle, a Third World debt crisis, and numerous takeovers and leveraged buyouts of US corporations. Yet, maintains Krugman, there is amazingly little political demand that the economy do better. It is an "Age of Diminished Expectations."

In this slim volume—a little gem—Krugman writes clearly, often engagingly, with 31 delightful simple charts (that he refers to at times as "pictures"). Rather than taking a particular standpoint, he explains the existing situation and the issues involved, as well as the alternative views of economists, well known for their differing opinions. On occasion, but with caution, he presents his own position. He ends with three possible scenarios of the eventual consequences of continuing present policies. The first is a "happy ending"—a renewed prosperity that makes today's doomsayers seem foolish. The second is a severe crisis—a "hard landing"—brought on by the excesses of the 1980s. Krugman gives these scenarios a less than 30 percent probability. The third, which he considers virtually a forecast, is that the economy will continue to "drift." While gloomy, this conclusion seems most realistic.

Henry Nau takes a more optimistic view. He argues that the United States can again be the leader of the world economy as it was from 1947 to 1967. What is required is for the country to take a dominant political position and to adhere to free market policies, with reduced levels of government spending, low income taxes, further rollbacks of government regulation, reliance on private enterprise and competition, and removal of international barriers to the free movement of products, labor, and capital.

Nau makes his case with a well-researched history of US policy since 1944. He finds only two periods of successful economic performance, the great postwar period starting with the Marshall plan and continuing through 1967, and the first Reagan administration, from 1981 to 1984. The first period was successful, in his view, because of US leadership and the pursuit by the Western world of conservative macroeconomic policies, little government regulation of the private sector, and reduction of trade and foreign exchange barriers, which led to low inflation and stable prices and exchange rates. The 1981-84 period was marked by a return to such conservative policies. Nau concedes that after 1984, the Reagan administration retreated, because of insufficient political will to stick to the policies as originally conceived in 1981.

But, as it turns out, many of the problems the US economy now faces can be laid at the doorstep of those very policies. Deregulation is largely responsible for the savings and loan failure; competition among commercial banks helped foster excessive lending to Third World countries and other risky overlending, which now threatens the solvency of the banking system; lowering of income taxes has brought the government near bankruptcy; and increased inequality of income is bringing about a class consciousness of rich and poor, now partly responsible for the political difficulties complicating resolution of the budget deficit. In addition, the US economic expansion of the 1980s was financed in large part by the savings of the rest of the world. Comparison with the successful Marshall Plan era is relevant, but not for the reasons Nau suggests. The United States, finding itself with a large share of the world's gold reserves, was able and willing to provide assistance to Western Europe. Implementation of the Marshall Plan, moreover, is not an example of free market policies but rather of carefully planned coordinated government action. Nau's optimism must thus be tempered with considerable skepticism.

Margaret Garritsen de Vries

Robert J. Barro

Macroeconomic Policy

Harvard University Press, Cambridge, MA, USA, 1990, 379 pp., $27.50.

This book is a collection of 13 papers written by one of the profession's most prominent and widely read macroeconomic theorists. All but one of the papers have been published previously, and many of them will be familiar to anyone who has kept abreast of developments in macro theory and policy over the past decade. Among these, one would certainly include Barro's work with David Gordon on the "rules-versus-discretion" controversy, and his more recent work on fiscal policies. Two very recent papers are also included in this volume, one on the issue of interest rate targeting and the other, a survey paper on the Ricardian approach to budget deficits.

The volume is divided into three main sections, which correspond to the broad themes of Barro's writings over the past decade. Part I deals with the "rules-versus-discretion" debate and includes, in addition to the two papers with Gordon, a concise introductory chapter surveying the main issues. Part II deals with the role of money in the business cycle, while Part III focuses on fiscal policy issues.

In his joint work with Gordon, Barro analyzed a simple economy in which output responds positively to unexpected inflation. Their main objective was to formulate a positive theory of monetary policy that might be applicable under current monetary arrangements in the United States in which the Federal Reserve has broad discretion to set policy without having to follow formal rules. In addition to the prediction of relatively high inflation (relative, that is, to an equilibrium with rules), they used their model to predict how policy would react to various changes in the economic environment. They also examined the extent to which the reputation of the monetary authority (i.e., its past success at controlling inflation) might substitute for formal rules in controlling inflation.

From the three chapters that re-examine the role of money in business fluctuations, it is clear that Barro wishes to de-emphasize the real effects of monetary variables. This is a position he finds consistent with the available evidence.

In the fiscal area, the counterpart to monetary neutrality is the so-called Ricardian equivalence theorem, which contends that the method of financing a given deficit (by taxes or borrowing) is irrelevant. While there are many counter-arguments to the Ricardian view, Barro's basic conclusion is that "like the Modigliani-Miller theorem in corporate finance—the Ricardian theorem is the right starting point for analyses of intertemporal government finance" (p. 4). In addition to an elegant survey of these issues, the final section also contains an exposition of Barro's tax-smoothing model and some empirical tests of its main implications, as well as an investigation of the macroeconomic effects of government expenditures, both theoretically and empirically.

Barro's contributions have covered many of the main issues of macroeconomic policy that are likely to occupy both the profession and policymakers for years to come. This book will therefore provide essential reading for anyone interested in formulating his own views on these questions.

Jonathan Ostry

William S. Haraf and Thomas D. Willett (editors)

Monetary Policy for a Volatile Global Economy

The AEI Press, Lanham, MD, USA, 1990, xiii + 198 pp., $24.95.

Economic literature is filled with articles and books on issues relating to the choice of exchange rate regimes and the conduct of stabilization policies in open economies. But these issues are important. This selected collection of six papers and four commentaries, prepared for a conference at the American Enterprise Institute, offers interesting perspectives on this broad theme.

How well can the choice of exchange rate regime be predicted by country characteristics or the nature of economic disturbances? Have floating exchange rates been excessively volatile? Does exchange rate variability significantly depress the volume of international trade? And how much wisdom on the choice of exchange rate regime has been acquired from simulation analysis with multicountry macroeconometric models? These are the questions addressed by Hali Edison and Michael Melvin in a fairly comprehensive survey of the empirical literature. It is highly recommended for those not yet convinced that empirical studies provide few, if any, clear answers on the appropriate choice of regime. The commentary by Morris Goldstein, who discusses some additional issues, including whether the choice of exchange regimes can have much effect on the authorities' ability to discipline fiscal policy, is also highly recommended.

Thomas Willett and Clas Wihlborg challenge the popular view that international capital flows and exchange rate movements are primarily disruptive. The authors emphasize that capital flows can either aggravate or mitigate exchange rate fluctuations, domestic macroeconomic instability, and the international transmission of disturbances. More than half of the chapter is devoted to the subjects of exchange rate determination and the behavior of the US dollar during the 1980s. Additional and contrasting views on these topics are presented in the commentary by William Branson and in a subsequent paper and commentary by Alan Stockman and Jeffrey Frankel, respectively. The book also includes a chapter by Gottfried Haberler on the evolution toward economic and monetary union in Europe.

The final two papers provide insights on issues related to the external deficit and debt positions of the United States. Guido Tabellini argues that the accumulation of a large dollar-denominated net debt position could impair the commitment of the United States to combat inflation, with further implications for international monetary cooperation. His conclusion that "monetary cooperation... might weaken the incentives for the debtor country to correct its fiscal deficit (p. 144)" is not convincing, for reasons discussed in the penetrating commentary by Jacob Dreyer. Nonetheless, this is a paper many readers would find provocative.

Richard Cooper's brief paper addresses the "unpleasant arithmetic" of eliminating the US current account deficit. The sobering conclusion is that, unless new mechanisms are established to help developing countries increase their imports substantially, the US deficit cannot be eliminated within a 5-year horizon if world recession is to be avoided.

Peter Isard

Willem H. Buiter

Principles of Budgetary and Financial Policy

The MIT Press, Cambridge, MA, USA, 1990, vii + 461 pp., $40.

In fiscal economics there is a marked gap between those specializing in the microeconomic theory of neoclassical public finance and those in the macroeconomic neo-Keynesian theory of stabilization policy. Willem Buiter is one of the pioneers who has attempted to forge links between the two, in skillfully formulating and analyzing the microeconomic foundations of our macro theories. The success of this approach is amply demonstrated in this collection of 13 papers, the majority of which were published over 1976-88.

Inevitably, many of these essays rely heavily on the short-hand of mathematics, placing the analysis beyond the reach of the layman. However, underlying Buiter's elegantly formulated models is a discussion of some of the most pressing policy issues: How can economists explain the simultaneous occurrence of fiscal and balance of payments current account deficits? Must such a high fiscal deficit inevitably result in inflation? Does the expenditure underlying such a high deficit "crowd out" private saving and capital formation and lead to a deterioration in the balance of payments? The answers that economists have formulated to such questions, in turn, have determined the economic policies that directly affect the man in the street.

While at first glance this group of papers appears a little heterogeneous, four main themes can be discerned. First, the stabilization role of fiscal policy cannot be analyzed separately from its allocation and distribution roles. In many of these essays, Buiter clarifies how certain fiscal policy instruments adopted for stabilization purposes, in so much as they affect aggregate demand, alter relative prices and hence the distribution of resources. Second, the author forces us to realize that the way we measure things colors our understanding of the processes we are measuring. In particular, when attempting to measure public sector activity over time, the author stresses there are no "model-free" measures of fiscal stance and compels us to re-examine the models on which our conventional measures are based. Third, no analysis of fiscal policy can be complete without taking into account the relationship between public and private economic activity. While others have focused almost exclusively on the displacement of private economic activity by public economic activity, or "crowding out," the author is at pains to point out that insofar as public sector activity is reinforcing or complementary, there could well be some "crowding in." Fourth, and perhaps most controversial, is the author's firmly held belief on the importance of the choice of alternative financing modes in affecting the fiscal impact on inflation, solvency, and crowding out.

Jack Diamond

Andrew B. Stoeckel, David Vincent, and Sandy Cuthbertson (editors)

Macroeconomic Consequences of Farm Support Policies

Duke University Press, Durham, NC, USA, 1989, xiii + 381 pp., $57.50.

The subject of international agricultural protection has been receiving increasing attention, particularly in the context of the Uruguay Round of trade negotiations. At the center of discussion has been the high level of such protection in the major trading countries and blocks. This is a provocative and well-written volume of ten research papers intended to spread awareness among the public and policymakers of the macroeconomic costs and benefits of the policies in both industrial and developing countries.

An analysis of this multifaceted phenomenon would be incomplete if it were confined only to the agricultural sector. What is needed is an economywide analysis encompassing the second round (effects following the initial impact of a policy change) as well as indirect effects. This is exactly what researchers from different parts of the world do in their studies covering Australia, Japan, the Republic of Korea, and the United States, as well as the European Community (EC) and six representative developing countries.

The analyses brings out many powerful conclusions. Developing countries, even those exporting oil and importing food on a net basis, stand to gain from an estimated $26 billion increase in real income that would result from agricultural liberalization in the industrial countries (Loo and Tower, Chapter II). The economic position of the industrial countries would also be strengthened with the adoption of this policy. Agricultural protection has cost the German economy 200,000 to 400,000 jobs and a loss in real GDP of 3 percent, as higher prices have made industrial goods less competitive internationally (Dicke et al., Chapter III). The four largest countries in the EC have lost around four million jobs (Breckling et al., Chapter IV), and Japan's export earnings have been lowered by 3 percent and higher agricultural prices have reduced the average real wage of workers by 2.5 percent (Vincent, Chapter V). Similar types of economic consequences would follow for newly industrialized countries such as the Republic of Korea (Vincent, Chapter VI). Australia, which taxes agriculture indirectly by affording protection to industry, would experience a decline in domestic prices and an improvement in international competitiveness if assistance to both sectors is withdrawn (Higgs, Chapter X).

Both the US government budget and the trade balance would improve and real income increase with the freeing of agriculture (Feltenstein, Chapter VII; Robinson et al., Chapter VIII) even if the United States liberalized unilaterally. A 5.5 percent reduction in the agricultural labor force would occur as a result (Hertel, Chapter IX), though the output adjustments within the agriculture would be uneven; sugar and dairy sectors will contract, while oil seeds will expand. Outputs of nonagricultural manufacturing and services will be higher by $18 billion, raising real income in the United States by $14 billion.

Clearly, these results are significant in the design of economic policy. However, a word of caution: the economywide ("computable" general equilibrium) models make various simplifying assumptions, rely extensively on externally estimated elasticities, and employ data of a given year assumed to be an "equilibrium" year. These results are very sensitive to the use of different elasticities or underlying assumptions and data. Nevertheless, these models possess sound microeconomic foundations, are internally consistent, and have the capability of providing detailed sectoral results, which enable policymakers to think about the mechanisms behind the results. In interpreting the results, one should perhaps then focus more on the direction, rather than the extent, of change. *Sanjeev Gupta*

BOOKS *in brief*

Roy C. Smith

The Global Bankers

Truman Talley Books/Plume, New York, NY, USA, 1990, vii + 405 pp., $22.50 (paper $10.95).

For global banking institutions and their bankers, the past 15 years have brought enormous changes, changes that have simultaneously managed to both enlarge and dramatically contract their world. This book chronicles these developments in a highly readable and anecdotal style, providing useful insights —from a practitioner's point of view—about how the new breed of bankers manage the vast sums of money flowing around the globe. The author, formerly with Goldman Sachs (now a professor at New York University), focuses on each of the three continental centers—New York, London, and Tokyo—bringing to life such issues as Japan's major investment in US industry, Germany's potentially dominant role in Europe, the impact of Third World debt on US banks, foreign involvement in Wall Street's high stake mergers, the Japanese ethic and bargaining methods, the huge Eurobond market, and London's "Big Bang." He concludes with a look at the megatrends that may shape the years ahead—one having to do with technology, the other with how people choose to live—noting that "the frontier days are not yet over."

Abbas M. Kesseba (editor)

Technology Systems for Small Farmers: Issues and Options

Westview Press, Boulder, CO, USA, 1990, xiii + 229 pp., $19.95.

If extension systems are the transmission gears connecting agricultural research and the small farmer, development experience suggests that it is about time to go to the mechanic. This collection of essays about how to improve agricultural research and extension originated in papers from a 1988 seminar on "The Generation and Transfer of Technology for Poor Small Farmers" organized by the International Fund for Agricultural Development. They have since been revised and supplemented with additional information. The main concerns uniting the essays are that despite widespread awareness of the importance of small farmers for national economies, and the growth of on-farm research programs, the system involving research, extension, and the farmer is not delivering the goods. The contributors seek to explain the conceptual and practical reasons for this failure and suggest many ways out of the problem.

Jean Dermine (editor)

European Banking in the 1990s

Basil Blackwell, Cambridge, MA, USA, 1990, viii + 476 pp., $69.95.

Igno Walter and Roy C. Smith

Investment Banking in Europe

Basil Blackwell, Cambridge, MA, USA, 1990, v + 169 pp., $60.

At a time when Europe is going through many changes and the process of European integration is gathering pace, these books provide a substantive sober analysis of the likely effects of 1992 on international financial services. The volume edited by Jean Dermine consists of fourteen papers, each followed by a commentary, and discusses some of the key issues faced by European bankers. The contributors address the pattern of regulation likely to emerge in Europe, the developments in the equity markets and in investment banking, and the impact of integration on the Euromarkets. The structural effects of financial integration in the banking market of France, Italy, Spain, Portugal, Switzerland, and the Federal Republic of Germany are also discussed. The last section illustrates the lessons that can be drawn from the integration of interstate banking in the United States. Of related interest, the second book assesses the directions of EC economic and financial restructuring in the 1990s. Backed by a wealth of original data, the authors predict a major growth in the following areas: underwriting, corporate financial advisory services (including mergers and acquisitions, breakups, and leveraged buyouts), secondary market brokerage and trading, and investment management services.

Other Books Received

Listed below are some of the books we received in 1990 but were unable to review because of lack of space.

Mariane Berg (editor) **Political Economy in the Twentieth Century**, Barnes and Noble Books, Savage, MD, USA, 1990, vi + 164 pp., $33.75.

Gilbert Blardone, **Le Fonds Monétaire International : l'Ajustement et les Coûts de l'Homme,** Les Editions del L'Epargne, Paris, France, 1990, 133 pp., FF180.

Jan Bojo, Karl-Goran Maler, and Lena Unemo, **Environment and Development: An Economic Approach**, Klumer Academic Publishers, Boston, MA, USA, 1990, viii + 167 pp., $57.

Thomas Grennes (editor), **International Financial Markets and Agricultural Trade**, Westview Press, Boulder, CO, USA, 1989, vi + 306 pp., $38.50.

James R. Lincoln and Arne L. Kalleberg, **Culture, Control and Commitment: A Study of Work Organization and Work Attitudes in the United States and Japan**, Cambridge University Press, New York, NY, USA, 1990, viii + 286 pp., $44.50.

Raul L. Madrid, **Over-Exposed: US Banks Confront the Third World Debt Crisis**, Investor Responsibility Research Center Inc., Washington, DC, USA, 1990, xii + 260 pp., $40.

William Nicoll and Trevor C. Salmon, **Understanding the European Communities**, Barnes and Noble Books, Savage, MD, USA, 1990, x + 264 pp., $42.50.

R.H. Rolf Seringhaus and Philip J. Rosson, **Government Export Promotion**, Routledge, New York, NY, USA, 1989, xx + 195 pp., $49.95.

Peter Skott, **Conflict and Effective Demand in Economic Growth**, Cambridge University Press, New York, NY, USA, 1989, x + 175 pp. $34.50.

Michael Steinberg (editor), **The Technical Challenges and Opportunities of a United Europe**, Barnes and Noble Books, Savage, MD, USA, 1990, 195 pp., $36.50.

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C. Total paid and/or requested circulation	46,200	43,060
D. Free distribution by mail, carrier or other means. Samples, complimentary and other free copies	11,325	11,295
E. Total distribution (sum of C and D)	57,525	54,355
F. Copies not distributed	725	1,645
G. Total (sum of E and F)	58,250	56,000

I certify that the statements made by me above are correct and complete.

Shuja Nawaz, Editor

LETTERS

Technical assistance in Eastern Europe

This letter is provoked by "The Challenge of Economic Reforms in Eastern Europe" by Willi Wapenhans, and the box on page 28 on Bank-IMF technical assistance for Eastern Europe, in "Reshaping Technical Assistance" by Laura Wallace (December 1990).

That there is a need for financial flows to the area is not questioned. However, if such flows are to reach the levels necessary to avert economic chaos, the post-independence debt of these countries must be serviced in strict accordance with the terms of the various loan agreements. Any late payment of principal or interest will probably curtail sharply any additional commercial bank lending.

It would seem appropriate for the Bank and IMF to initiate at the earliest possible time technical assistance programs to help these countries in establishing national export credit agencies. This is because increasing exports is probably the most efficient way the countries of East Europe can acquire the foreign exchange needed for debt service. It is normal commercial practice for sellers to extend credit. East Europe produces little that is not available from suppliers in other countries, so unless the exporters of the area have access to export credit, guarantees, and insurance, their exports will not reach the levels needed for economic growth or debt service.

Each of the OECD countries has its own official export credit agency. Most developing countries also have such programs, either in place or in the planning stage. The sooner the new creditors of East Europe appreciate their debtors' need for export earnings, the brighter the prospects for the growth of market economies in East Europe.

Albert H. Hamilton
First Washington Associates
Arlington, Virginia, USA

An incomplete blueprint for privatization

The article by Helen Nankani ("Lessons of Privatization in Developing Countries," March 1990) discusses several elements for success of privatization based on the case studies of Chile, Malaysia, and Sri Lanka: Political will (which, in my opinion, precedes the decision to privatize), presence of a quasi-developed capital market, and an unbiased evaluation of the costs and benefits of privatization.

The author, however, neglects to include in the "blueprint" for privatization, the private sale of shares or assets that can target a potential buyer involved in a similar activity. This is the case of the Cameroonian Flour-Milling Company, which has been taken over by a wheat flour importer. Nonetheless, before the private sale of shares, it is necessary to assess the costs and benefits of privatization and the claims to be sold. The government must also carefully choose the macroeconomic and sectoral policies before and after the period of privatization.

With regard to the choice of macroeconomic policies, I do not agree with the author that the sequencing of measures is unnecessary. In choosing between liberalization and privatization, it is preferable to opt for liberalizing first, as it is far easier to privatize after liberalizing, than vice versa.

Isaac Tamba
Yaoundé, Cameroon

One Europe

In his article, "Europe—The Quest for Monetary Integration" (December 1990), Horst Ungerer makes little reference to the implications of a possible monetary union for the EC capital markets (particularly stock markets). I agree that capital controls are important sources of segmentation in financial markets, hence the removal of remaining capital controls in France and Italy should be considered as important events for monetary and financial integration in Europe.

However, the appropriate question that should be raised at this stage is whether the risk premia differentials across the EC markets—say the Benelux, Germany, France, and Denmark—are significant. In other words, what has happened, if anything, to the risk premia as capital controls have been lifted over the EC market is a question to which an answer should be given. If government controls are the only sources of segmentation in the EC capital markets, then I can expect that the markets have become more integrated ever since the capital controls were eliminated. What if there are other reasons that make stock exchanges segmented—such as the inability of a group of investors to trade in a particular market because of difficulties in obtaining information about foreign stocks, and differences in financial reporting.

I believe that the answers to the following questions are important: Does risk for similar or interlisted stocks carry the same price in EC exchanges? Had the interlisted stocks been segmented before the capital controls were lifted and are they now more integrated in the absence of government impediments?

A high degree of price and cost convergence in Germany, France, Denmark, the Netherlands, Belgium, and Luxembourg excludes the price of risk.

Haluk Akdogan
New York, NY, USA

New readers who wish to receive *Finance & Development* regularly should apply in writing to Subscription Services, *Finance & Development*, International Monetary Fund, Washington, DC 20431, USA, specifying the language edition and briefly stating the reasons for their request. The contents of *Finance & Development* are indexed in Business Periodicals Index, Public Affairs Information Service (PAIS), and Bibliographie Internationale des Sciences Sociales. An annual index of articles and reviews is carried in the December issue.

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German Unification: Economic Issues (Occasional Paper No. 75)

Edited by Leslie Lipschitz and Donogh McDonald

Written by the staff of the IMF, this comprehensive study is the first detailed analysis of its kind to be released since German economic, monetary, and social union was achieved in July 1990. It will serve as an invaluable guide to economists, policymakers, and all others interested in the process of unification. In 12 separate chapters, it covers such subjects as the economic background to unification in both east and west Germany, investment needs in east Germany, the domestic and international macroeconomic consequences of unification, immigration, saving and investment, and other vital topics.

Available in English. ISBN 1-55775-200-1. xv + 171 pages • 1991

The Impact of the European Community's Internal Market on the EFTA (Occasional Paper No. 74)

By Richard K. Abrams et al

This study examines sector by sector the impact of the European Community's internal market on the member countries of the European Free Trade Association, which are concerned about a weakening of their competitive position vis-à-vis the EC countries. The study also looks at the impact of EC efforts at monetary unification and tax harmonization on the EFTA. Among the paper's conclusions are that the EC internal market should have a generally positive effect on the EFTA economies, given some concessions by EFTA countries.

Available in English. ISBN 1-55775-174-9. v + 66 pages • 1991

The European Monetary System: Developments and Perspectives (Occasional Paper No. 73)

By Horst Ungerer, Jouko Hauvonen, Augusto Lopez-Claros, and Thomas Mayer

This Occasional Paper updates and complements two earlier IMF studies on the European Monetary System. In addition, it surveys financial integration in the European Community and the present debate about monetary integration, with particular attention to the proposals of the Delors Committee on Economic and Monetary Union. The text of the study is supplemented by thirty-two statistical tables and twenty-four charts, plus a complete chronology of key developments in EC monetary and financial integration.

Available in English. ISBN 1-55775-172-2. vi + 99 pages • 1990

The Czech and Slovak Federal Republic: An Economy in Transition (Occasional Paper No. 72)

By Jim Prust and an IMF Staff Team

This paper is based on an internal report prepared by IMF staff in connection with the application of the Czech and Slovak Federal Republic (Czechoslovakia) for membership in the IMF. Staff teams gathered statistical and other information for the report during two rounds of discussions in Prague, in March and April 1990. The paper takes the reader through the evolution of the country's economic system and its economy; the state of its economy in the late 1980s; and the reform efforts begun in December 1987. The text of the paper is supplemented by complete charts, tables, and appendices.

Available in English. ISBN 1-55775-169-2. vii + 70 pages • 1990

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